

# STRESS ANALYSIS - PAGE 1



Job Number: <b>00-0002</b>	Job Name: <b>LRFD - SJI SUBMITTAL</b>	Date Run: <b>10/8/2006</b>
Location: <b>JUAREZ,</b>	Joist Description: <b>Deep Long Span 40G6N18F</b>	Mark: <b>G01</b>

## Geometry

Base Length: <b>40-0</b>	Working Length: <b>39-8</b>	Joist Depth: <b>40.00</b>	Effective Depth: <b>37.87</b>	BC Panel Length: <b>10 @ 12-0</b>	Shape: <b>Parallel Chords</b>
Variable	Left End	Right End			
BC Panel	3-4	3-4			
TC Panel	3-4	3-4			
First Half	3-4	3-4			
First Diag.	6-8	6-8			
Depth	40.00	40.00			

## Loads

Point Load at Diagonals (lbs)	18,000.00
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## Stress Analysis Summary

Int. Panel TC: 40.00	Max Panel BC: 80.00	Reaction LE: 54,000.02	Reaction RE: 54,000.01	Minimum Shear: 13,500.00	Max TC Comp.: 159,222.67	Max BC Tension 168,728.50		
Member	TC Tension	TC Compresion	BC Tension	BC Compresion	Web Tension	Web Comp.	Web Length	PP Dist.
W2	0.00	45,152.71	0.00	0.00	63,747.69	0.00	53.65	0-2
W3	0.00	45,152.71	92,681.84	0.00	0.00	65,452.42	55.08	3-4
W4	0.00	121,199.34	92,681.84	0.00	39,271.45	0.00	55.08	6-8
W5	0.00	121,199.34	149,716.83	0.00	0.00	39,271.46	55.08	10-0
W6	0.00	159,222.67	149,716.83	0.00	19,635.73	0.00	55.08	13-4
W7	0.00	159,222.67	168,728.50	0.00	0.00	19,635.73	55.08	16-8
W7	0.00	159,222.66	168,728.50	0.00	0.00	19,635.73	55.08	20-0
W6	0.00	159,222.66	149,716.83	0.00	19,635.73	0.00	55.08	23-4
W5	0.00	121,199.34	149,716.83	0.00	0.00	39,271.46	55.08	26-8
W4	0.00	121,199.34	92,681.84	0.00	39,271.46	0.00	55.08	30-0
W3	0.00	45,152.70	92,681.84	0.00	0.00	65,452.43	55.08	33-4
W2	0.00	45,152.70	0.00	0.00	63,747.68	0.00	53.65	36-8

## Standard Verticals

Member	Position	Max Tension	Max Comp.	Length
V1	End Panel	0.00	3,184.47	37.87
V2	Interior	0.00	3,184.46	37.87

# STRESS ANALYSIS - PAGE 2



Job Number: <b>00-0002</b>	Job Name: <b>LRFD - SJI SUBMITTAL</b>	Date Run: <b>10/8/2006</b>
Location: <b>JUAREZ,</b>	Joist Description: <b>Deep Long Span 40G6N18F</b>	Mark: <b>G01</b>

## Chord Properties

Chord	Area	Rx	Rz	Ryy	Y	Ix	Q	Material
TC	2.8594	1.2346	0.7876	2.0514	1.1383	4.3586	1.0000	42 = 4 x 4 x .375
BC	2.0867	1.0826	0.6900	1.8419	0.9902	2.4454	0.9854	3E = 3 1/2 x 3 1/2 x .312

## Axial and Bending Analysis

K:	Fy:	Fb:	Mom of Inertia:	LL 240:	LL 240:	Max Bridg TC:	Max Bridg BC:
<b>1.00</b>	<b>50,000.00</b>	<b>45,000.00</b>	<b>3,467.15</b>	<b>3,113.06</b>	<b>3,113.06</b>	<b>29-0 3/4</b>	<b>36-10</b>

Top Chord Check	End Panel LE	First Panel LE	Interior Panel	First Panel RE	End Panel RE	Gap Between Chords:
Length	38.00	40.00	40.00	40.00	38.00	<b>1.00</b>
Bending Load	0.00	0.00	0.00	0.00	0.00	Min Weld Len 2X: <b>1.1437</b>
Axial Load	45,152.71	45,152.71	159,222.67	45,152.70	45,152.70	Max Load Fillers TC: <b>230,262.23</b>
fa	7,895.56	7,895.56	27,842.22	7,895.55	7,895.55	Max Load no Fillers TC: <b>213,109.25</b>
Maximum K L/r	48.25	50.79	39.00	50.79	48.25	TC OAL/Ryy: <b>232.0318</b>
Fa	37,956.62	37,265.01	40,264.44	37,265.01	37,956.62	BC Stress: <b>40,430.36</b>
F'e	157,638.47	142,268.72	142,268.73	142,268.72	157,638.47	BC L/Rz: <b>115.9464</b>
Cm	0.9850	0.9834	0.9217	0.9834	0.9850	TC Shear Stress: <b>15,510.80</b>
Panel Point Moment	0.00	0.00	0.00	0.00	0.00	BC Shear Stress: <b>21,302.73</b>
Mid Panel Moment	0.00	0.00	0.00	0.00	0.00	
Panel Point fb	0.00	0.00	0.00	0.00	0.00	
Mid Panel fb	0.00	0.00	0.00	0.00	0.00	
Fillers	0	0	0	0	0	
Panel Point Stress	7,895.56	7,895.56	27,842.22	7,895.55	7,895.55	
Mid Panel Stress	0.2080	0.2119	0.6915	0.2119	0.2080	

## Web Design

Member	Web Tension	Allow Tension	Web Comp	Allow Comp	Weld	Qty	Material
W2	63,747.69	64,172.79	0.00	36,946.11	15.3 x 0.187	2	25 = 2 x 2 x .187
W3	0.00	98,739.00	65,452.42	67,913.28	15.7 x 0.188	2	2E = 2 1/2 x 2 1/2 x .230
W4	39,271.45	39,337.92	0.00	9,990.33	9.4 x 0.188	1	28 = 2 x 2 x .232
W5	0.00	78,675.84	39,271.46	43,449.21	9.4 x 0.188	2	28 = 2 x 2 x .232
W6	19,635.73	21,796.88	0.00	5,699.50	7.1 x 0.125	1	20 = 2 x 2 x .125
W7	0.00	43,593.75	19,635.73	22,686.34	7.1 x 0.125	2	20 = 2 x 2 x .125
W7	0.00	43,593.75	19,635.73	22,686.34	7.1 x 0.125	2	20 = 2 x 2 x .125
W6	19,635.73	21,796.88	0.00	5,699.50	7.1 x 0.125	1	20 = 2 x 2 x .125
W5	0.00	78,675.84	39,271.46	43,449.21	9.4 x 0.188	2	28 = 2 x 2 x .232
W4	39,271.46	39,337.92	0.00	9,990.33	9.4 x 0.188	1	28 = 2 x 2 x .232
W3	0.00	98,739.00	65,452.43	67,913.28	15.7 x 0.188	2	2E = 2 1/2 x 2 1/2 x .230
W2	63,747.68	64,172.79	0.00	36,946.11	15.3 x 0.187	2	25 = 2 x 2 x .187
V1	0.00	14,180.35	3,184.47	4,382.70	2.0 x 0.109	1	1C = 1 1/2 x 1 1/2 x .109
V2	0.00	14,180.35	3,184.46	4,382.70	2.0 x 0.109	1	1C = 1 1/2 x 1 1/2 x .109

# STRESS ANALYSIS - PAGE 1



Job Number: <b>00-0002</b>	Job Name: <b>LRFD - SJI SUBMITTAL</b>	Date Run: <b>10/8/2006</b>
Location: <b>JUAREZ,</b>	Joist Description: <b>Deep Long Span 40G7N18F</b>	Mark: <b>G02</b>

## Geometry

Base Length: <b>40-0</b>	Working Length: <b>39-8</b>	Joist Depth: <b>40.00</b>	Effective Depth: <b>37.84</b>	BC Panel Length: <b>10 @ 12-0</b>	Shape: <b>Parallel Chords</b>
Variable	Left End	Right End			
BC Panel	2-10 1/4	2-10 1/4			
TC Panel	2-10 1/4	2-10 1/4			
First Half	2-10 3/8	2-10 3/8			
First Diag.	5-8 5/8	5-8 5/8			
Depth	40.00	40.00			

## Loads

Point Load at Diagonals (lbs)	18,000.00
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## Stress Analysis Summary

Int. Panel TC: <b>34.25</b>		Max Panel BC: <b>68.63</b>	Reaction LE: <b>63,028.36</b>	Reaction RE: <b>62,971.64</b>	Minimum Shear: <b>15,757.09</b>	Max TC Comp.: <b>193,022.67</b>	Max BC Tension <b>193,048.33</b>	
Member	TC Tension	TC Compression	BC Tension	BC Compression	Web Tension	Web Comp.	Web Length	PP Dist.
W2	0.00	46,049.94	0.00	0.00	70,990.55	0.00	49.72	0-2
W3	0.00	46,049.94	95,134.16	0.00	0.00	72,995.38	51.12	2-10 1/4
W4	0.00	127,746.56	95,134.16	0.00	48,596.41	0.00	51.04	5-8 5/8
W5	0.00	127,746.56	160,358.92	0.00	0.00	48,596.41	51.04	8-6 7/8
W6	0.00	176,677.97	160,358.92	0.00	24,317.33	0.00	51.04	11-5 1/8
W7	0.00	176,677.97	192,997.00	0.00	0.00	24,317.33	51.04	14-3 3/8
W8	0.00	193,022.67	192,997.00	0.00	21,253.75	0.00	51.04	17-1 5/8
W8	0.00	193,022.67	193,048.33	0.00	0.00	21,253.75	51.04	19-11 7/8
W7	0.00	176,780.66	193,048.33	0.00	0.00	24,240.81	51.04	22-10 1/8
W6	0.00	176,780.66	160,512.98	0.00	24,240.82	0.00	51.04	25-8 3/8
W5	0.00	127,951.94	160,512.98	0.00	0.00	48,519.89	51.04	28-6 5/8
W4	0.00	127,951.94	95,390.89	0.00	48,519.89	0.00	51.04	31-4 7/8
W3	0.00	46,358.19	95,390.89	0.00	0.00	72,918.75	51.12	34-3 1/8
W2	0.00	46,358.19	0.00	0.00	71,147.88	0.00	49.88	37-1 1/2

## Standard Verticals

Member	Position	Max Tension	Max Comp.	Length
V1	End Panel	0.00	3,860.45	37.84
V2	Interior	0.00	3,860.46	37.84

## STRESS ANALYSIS - PAGE 2



Job Number: <b>00-0002</b>	Job Name: <b>LRFD - SJI SUBMITTAL</b>	Date Run: <b>10/8/2006</b>
Location: <b>JUAREZ,</b>	Joist Description: <b>Deep Long Span 40G7N18F</b>	Mark: <b>G02</b>

## Chord Properties

Chord	Area	Rx	Rz	Ryy	Y	Ix	Q	Material
TC	3.3050	1.2262	0.7847	2.0643	1.1607	4.9690	1.0000	44 = 4 x 4 x .437
BC	2.2897	1.0781	0.6883	1.8487	1.0018	2.6613	1.0000	3F = 3 1/2 x 3 1/2 x .344

## Axial and Bending Analysis

K: <b>1.00</b>	Fy: <b>50,000.00</b>	Fb: <b>45,000.00</b>	Mom of Inertia: <b>3,880.62</b>	LL 240: <b>3,484.30</b>	LL 240: <b>3,484.30</b>	Max Bridg TC: <b>29-2 7/8</b>	Max Bridg BC: <b>36-11 5/8</b>
Top Chord Check	End Panel LE	First Panel LE	Interior Panel	First Panel RE	End Panel RE	Gap Between Chords: <b>1.00</b>	
Length	32.25	34.38	34.25	34.63	32.25	Min Weld Len 2X: <b>1.3865</b>	
Bending Load	0.00	0.00	0.00	0.00	0.00	Max Load Fillers TC: <b>274,443.91</b>	
Axial Load	46,049.94	46,049.94	193,022.67	46,358.20	46,358.20	Max Load no Fillers TC: <b>258,772.11</b>	
fa	6,966.64	6,966.64	29,201.34	7,013.28	7,013.28	TC OAL/Ryy: <b>230.5833</b>	
Maximum K L/r	41.10	43.81	33.18	44.13	41.10	BC Stress: <b>42,156.48</b>	
Fa	39,771.45	39,108.35	41,519.11	39,028.32	39,771.45	BC L/Rz: <b>99.6977</b>	
F'e	215,867.31	190,003.20	191,392.61	187,269.38	215,867.31	TC Shear Stress: <b>15,894.08</b>	
Cm	0.9903	0.9890	0.9390	0.9888	0.9903	BC Shear Stress: <b>23,068.22</b>	
Panel Point Moment	0.00	0.00	0.00	0.00	0.00		
Mid Panel Moment	0.00	0.00	0.00	0.00	0.00		
Panel Point fb	0.00	0.00	0.00	0.00	0.00		
Mid Panel fb	0.00	0.00	0.00	0.00	0.00		
Fillers	0	0	0	0	0		
Panel Point Stress	6,966.64	6,966.64	29,201.34	7,013.28	7,013.28		
Mid Panel Stress	0.1752	0.1781	0.7033	0.1797	0.1763		

## Web Design

Member	Web Tension	Allow Tension	Web Comp	Allow Comp	Weld	Qty	Material
W2	70,990.55	78,675.84	0.00	48,504.91	13.7 x 0.232	2	28 = 2 x 2 x .232
W3	0.00	106,875.00	72,995.38	77,397.71	13.1 x 0.250	2	2F = 2 1/2 x 2 1/2 x .250
W4	48,596.41	49,639.59	0.00	28,714.26	15.3 x 0.143	2	21 = 2 x 2 x .143
W5	0.00	84,375.00	48,596.41	50,481.05	11.6 x 0.188	2	29 = 2 x 2 x .250
W6	24,317.33	24,819.80	0.00	7,514.77	7.6 x 0.143	1	21 = 2 x 2 x .143
W7	0.00	49,639.59	24,317.33	28,714.26	7.6 x 0.143	2	21 = 2 x 2 x .143
W8	21,253.75	21,796.88	0.00	6,639.32	7.6 x 0.125	1	20 = 2 x 2 x .125
W8	0.00	43,593.75	21,253.75	24,253.75	7.6 x 0.125	2	20 = 2 x 2 x .125
W7	0.00	43,593.75	24,240.81	24,253.75	8.7 x 0.125	2	20 = 2 x 2 x .125
W6	24,240.82	24,819.80	0.00	7,514.77	7.6 x 0.143	1	21 = 2 x 2 x .143
W5	0.00	84,375.00	48,519.89	50,481.05	11.6 x 0.188	2	29 = 2 x 2 x .250
W4	48,519.89	49,639.59	0.00	28,714.26	15.2 x 0.143	2	21 = 2 x 2 x .143
W3	0.00	106,875.00	72,918.75	77,397.71	13.1 x 0.250	2	2F = 2 1/2 x 2 1/2 x .250
W2	71,147.88	78,675.84	0.00	48,351.50	13.8 x 0.232	2	28 = 2 x 2 x .232
V1	0.00	14,180.35	3,860.45	4,390.58	2.0 x 0.109	1	1C = 1 1/2 x 1 1/2 x .109
V2	0.00	14,180.35	3,860.46	4,390.58	2.0 x 0.109	1	1C = 1 1/2 x 1 1/2 x .109

# STRESS ANALYSIS - PAGE 1



Job Number: <b>00-0002</b>	Job Name: <b>LRFD - SJI SUBMITTAL</b>	Date Run: <b>10/8/2006</b>
Location: <b>JUAREZ,</b>	Joist Description: <b>Deep Long Span 40G8N18F</b>	Mark: <b>G03</b>

## Geometry

Base Length: <b>40-0</b>	Working Length: <b>39-8</b>	Joist Depth: <b>40.00</b>	Effective Depth: <b>37.70</b>	BC Panel Length: <b>10 @ 12-0</b>	Shape: <b>Parallel Chords</b>
Variable	Left End	Right End			
BC Panel	2-6	2-6			
TC Panel	2-6	2-6			
First Half	2-6	2-6			
First Diag.	5-0	5-0			
Depth	40.00	40.00			

## Loads

Point Load at Diagonals (lbs)	18,000.00
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## Stress Analysis Summary

Int. Panel TC: 30.00	Max Panel BC: 60.00	Reaction LE: 72,000.00	Reaction RE: 72,000.00	Minimum Shear: 18,000.00	Max TC Comp.: 218,668.17	Max BC Tension 225,829.77		
Member	TC Tension	TC Compression	BC Tension	BC Compression	Web Tension	Web Comp.	Web Length	PP Dist.
W2	0.00	46,789.26	0.00	0.00	78,474.41	0.00	46.96	0-2
W3	0.00	46,789.26	96,920.59	0.00	0.00	80,511.80	48.18	2-6
W4	0.00	132,728.70	96,920.59	0.00	57,508.43	0.00	48.18	5-0
W5	0.00	132,728.70	168,536.80	0.00	0.00	57,508.44	48.18	7-6
W6	0.00	190,021.67	168,536.80	0.00	34,505.06	0.00	48.18	10-0
W7	0.00	190,021.67	211,506.53	0.00	0.00	34,505.07	48.18	12-6
W8	0.00	218,668.16	211,506.53	0.00	23,003.38	0.00	48.18	15-0
W9	0.00	218,668.16	225,829.77	0.00	0.00	23,003.38	48.18	17-6
W9	0.00	218,668.17	225,829.77	0.00	0.00	23,003.38	48.18	20-0
W8	0.00	218,668.17	211,506.55	0.00	23,003.38	0.00	48.18	22-6
W7	0.00	190,021.67	211,506.55	0.00	0.00	34,505.06	48.18	25-0
W6	0.00	190,021.67	168,536.81	0.00	34,505.07	0.00	48.18	27-6
W5	0.00	132,728.70	168,536.81	0.00	0.00	57,508.44	48.18	30-0
W4	0.00	132,728.70	96,920.59	0.00	57,508.43	0.00	48.18	32-6
W3	0.00	46,789.25	96,920.59	0.00	0.00	80,511.81	48.18	35-0
W2	0.00	46,789.25	0.00	0.00	78,474.41	0.00	46.96	37-6

## Standard Verticals

Member	Position	Max Tension	Max Comp.	Length
V1	End Panel	0.00	4,373.37	37.70
V2	Interior	0.00	4,373.37	37.70

# STRESS ANALYSIS - PAGE 2



Job Number: <b>00-0002</b>	Job Name: <b>LRFD - SJI SUBMITTAL</b>	Date Run: <b>10/8/2006</b>
Location: <b>JUAREZ,</b>	Joist Description: <b>Deep Long Span 40G8N18F</b>	Mark: <b>G03</b>

## Chord Properties

Chord	Area	Rx	Rz	Ryy	Y	Ix	Q	Material
TC	3.3050	1.2262	0.7847	2.0643	1.1607	4.9690	1.0000	44 = 4 x 4 x .437
BC	2.8594	1.2346	0.7876	2.0514	1.1383	4.3586	1.0000	42 = 4 x 4 x .375

## Axial and Bending Analysis

K: <b>1.00</b>	Fy: <b>50,000.00</b>	Fb: <b>45,000.00</b>	Mom of Inertia: <b>4,367.36</b>	LL 240: <b>3,921.33</b>	LL 240: <b>3,921.33</b>	Max Bridg TC: <b>29-2 7/8</b>	Max Bridg BC: <b>41-0 3/8</b>
Top Chord Check	End Panel LE	First Panel LE	Interior Panel	First Panel RE	End Panel RE	Gap Between Chords: <b>1.00</b>	
Length	28.00	30.00	30.00	30.00	28.00	Min Weld Len 2X: <b>1.5708</b>	
Bending Load	0.00	0.00	0.00	0.00	0.00	Max Load Fillers TC: <b>279,635.63</b>	
Axial Load	46,789.26	46,789.26	218,668.17	46,789.26	46,789.26	Max Load no Fillers TC: <b>267,301.06</b>	
fa	7,078.49	7,078.49	33,081.11	7,078.49	7,078.49	TC OAL/Ryy: <b>230.5833</b>	
Maximum K L/r	35.68	38.23	29.07	38.23	35.68	BC Stress: <b>39,489.36</b>	
Fa	40,999.43	40,438.51	42,304.54	40,438.51	40,999.43	BC L/Rz: <b>76.1835</b>	
F'e	286,371.81	249,461.66	249,461.67	249,461.66	286,371.81	TC Shear Stress: <b>18,415.25</b>	
Cm	0.9926	0.9915	0.9470	0.9915	0.9926	BC Shear Stress: <b>21,452.54</b>	
Panel Point Moment	0.00	0.00	0.00	0.00	0.00		
Mid Panel Moment	0.00	0.00	0.00	0.00	0.00		
Panel Point fb	0.00	0.00	0.00	0.00	0.00		
Mid Panel fb	0.00	0.00	0.00	0.00	0.00		
Fillers	0	0	0	0	0		
Panel Point Stress	7,078.49	7,078.49	33,081.11	7,078.49	7,078.49		
Mid Panel Stress	0.1726	0.1750	0.7820	0.1750	0.1726		

## Web Design

Member	Web Tension	Allow Tension	Web Comp	Allow Comp	Weld	Qty	Material
W2	78,474.41	78,675.84	0.00	51,100.27	15.2 x 0.232	2	28 = 2 x 2 x .232
W3	0.00	117,942.38	80,511.80	90,894.48	15.9 x 0.227	2	31 = 3 x 3 x .227
W4	57,508.43	60,572.16	0.00	38,470.03	14.7 x 0.176	2	24 = 2 x 2 x .176
W5	0.00	91,355.04	57,508.44	67,220.24	13.8 x 0.188	2	2C = 2 1/2 x 2 1/2 x .212
W6	34,505.06	35,008.88	0.00	11,689.49	8.3 x 0.188	1	26 = 2 x 2 x .205
W7	0.00	56,288.79	34,505.07	35,236.38	9.5 x 0.163	2	23 = 2 x 2 x .163
W8	23,003.38	24,819.80	0.00	8,432.13	7.2 x 0.143	1	21 = 2 x 2 x .143
W9	0.00	43,593.75	23,003.38	25,346.71	8.3 x 0.125	2	20 = 2 x 2 x .125
W9	0.00	43,593.75	23,003.38	25,346.71	8.3 x 0.125	2	20 = 2 x 2 x .125
W8	23,003.38	24,819.80	0.00	8,432.13	7.2 x 0.143	1	21 = 2 x 2 x .143
W7	0.00	56,288.79	34,505.06	35,236.38	9.5 x 0.163	2	23 = 2 x 2 x .163
W6	34,505.07	35,008.88	0.00	11,689.49	8.3 x 0.188	1	26 = 2 x 2 x .205
W5	0.00	91,355.04	57,508.44	67,220.24	13.8 x 0.188	2	2C = 2 1/2 x 2 1/2 x .212
W4	57,508.43	60,572.16	0.00	38,470.03	14.7 x 0.176	2	24 = 2 x 2 x .176
W3	0.00	117,942.38	80,511.81	90,894.48	15.9 x 0.227	2	31 = 3 x 3 x .227
W2	78,474.41	78,675.84	0.00	51,100.27	15.2 x 0.232	2	28 = 2 x 2 x .232
V1	0.00	14,180.35	4,373.37	4,422.44	2.0 x 0.109	1	1C = 1 1/2 x 1 1/2 x .109
V2	0.00	14,180.35	4,373.37	4,422.44	2.0 x 0.109	1	1C = 1 1/2 x 1 1/2 x .109

# STRESS ANALYSIS - PAGE 1



Job Number: <b>00-0002</b>	Job Name: <b>LRFD - SJI SUBMITTAL</b>	Date Run: <b>10/8/2006</b>
Location: <b>JUAREZ,</b>	Joist Description: <b>Deep Long Span 40G4N84F</b>	Mark: <b>G04</b>

## Geometry

Base Length: <b>35-0</b>	Working Length: <b>34-8</b>	Joist Depth: <b>40.00</b>	Effective Depth: <b>36.54</b>	BC Panel Length: <b>10 @ 12-0</b>	Shape: <b>Parallel Chords</b>
Variable	Left End	Right End			
BC Panel	4-4 1/2	4-4 1/2			
TC Panel	4-4 1/2	4-4 1/2			
First Half	4-4 1/2	4-4 1/2			
First Diag.	8-9	8-9			
Depth	40.00	40.00			

## Loads

Point Load at Diagonals (lbs)	84,000.00
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## Stress Analysis Summary

Int. Panel TC: <b>52.50</b>		Max Panel BC: <b>105.00</b>		Reaction LE: <b>168,000.00</b>		Reaction RE: <b>168,000.00</b>		Minimum Shear: <b>42,000.00</b>		Max TC Comp.: <b>415,514.81</b>		Max BC Tension <b>475,859.25</b>	
Member	TC Tension	TC Compression	BC Tension	BC Compression	Web Tension	Web Comp.	Web Length	PP Dist.					
W2	0.00	174,136.91	0.00	0.00	214,941.05	0.00	62.33	0-2					
W3	0.00	174,136.91	355,170.31	0.00	0.00	220,565.41	63.96	4-4 1/2					
W4	0.00	415,514.78	355,170.31	0.00	73,521.80	0.00	63.96	8-9					
W5	0.00	415,514.78	475,859.25	0.00	0.00	73,521.80	63.96	13-1 1/2					
W5	0.00	415,514.81	475,859.25	0.00	0.00	73,521.80	63.96	17-6					
W4	0.00	415,514.81	355,170.31	0.00	73,521.80	0.00	63.96	21-10 1/2					
W3	0.00	174,136.91	355,170.31	0.00	0.00	220,565.39	63.96	26-3					
W2	0.00	174,136.91	0.00	0.00	214,941.06	0.00	62.33	30-7 1/2					

## Standard Verticals

Member	Position	Max Tension	Max Comp.	Length
V1	End Panel	0.03	8,310.30	36.54
V2	Interior	0.00	8,310.30	36.54

## STRESS ANALYSIS - PAGE 2



Job Number: <b>00-0002</b>	Job Name: <b>LRFD - SJ SUBMITTAL</b>	Date Run: <b>10/8/2006</b>
Location: <b>JUAREZ,</b>	Joist Description: <b>Deep Long Span 40G4N84F</b>	Mark: <b>G04</b>

### Chord Properties

Chord	Area	Rx	Rz	Ryy	Y	Ix	Q	Material
TC	8.4375	1.8267	1.1734	2.9176	1.7750	28.1549	1.0000	67 = 6 x 6 x .750
BC	5.7500	1.8607	1.1847	2.8698	1.6848	19.9078	0.9607	63 = 6 x 6 x .500

### Axial and Bending Analysis

K: <b>1.00</b>	Fy: <b>50,000.00</b>	Fb: <b>45,000.00</b>	Mom of Inertia: <b>9,179.68</b>	LL 240: <b>12,347.62</b>	LL 240: <b>12,347.62</b>	Max Bridg TC: <b>41-4</b>	Max Bridg BC: <b>57-4 3/4</b>
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Top Chord Check	End Panel LE	First Panel LE	Interior Panel	First Panel RE	End Panel RE	Gap Between Chords: <b>1.00</b>
Length	50.50	52.50	52.50	52.50	50.50	Min Weld Len 2X: <b>2.9848</b>
Bending Load	0.00	0.00	0.00	0.00	0.00	Max Load Fillers TC: <b>690,763.56</b>
Axial Load	174,136.91	174,136.91	415,514.81	174,136.91	174,136.91	Max Load no Fillers TC: <b>655,978.75</b>
fa	10,319.22	10,319.22	24,623.10	10,319.22	10,319.22	TC OAL/Ryy: <b>142.5820</b>
Maximum K L/r	43.04	44.74	35.99	44.74	43.04	BC Stress: <b>41,379.07</b>
Fa	39,300.39	38,872.81	40,934.14	38,872.81	39,300.39	BC L/Rz: <b>88.6263</b>
F'e	195,392.70	180,789.20	180,789.20	180,789.20	195,392.70	TC Shear Stress: <b>14,992.40</b>
Cm	0.9842	0.9829	0.9455	0.9829	0.9842	BC Shear Stress: <b>22,426.61</b>
Panel Point Moment	0.00	0.00	0.00	0.00	0.00	
Mid Panel Moment	0.00	0.00	0.00	0.00	0.00	
Panel Point fb	0.00	0.00	0.00	0.00	0.00	
Mid Panel fb	0.00	0.00	0.00	0.00	0.00	
Fillers	0	0	0	0	0	
Panel Point Stress	10,319.22	10,319.22	24,623.10	10,319.22	10,319.22	
Mid Panel Stress	0.2626	0.2655	0.6015	0.2655	0.2626	

### Web Design

Member	Web Tension	Allow Tension	Web Comp	Allow Comp	Weld	Qty	Material
W2	214,941.05	215,879.05	0.00	169,953.78	30.9 x 0.312	2	41 = 4 x 4 x .312
W3	0.00	297,452.78	220,565.41	243,783.27	22.7 x 0.437	2	44 = 4 x 4 x .437
W4	73,521.80	78,675.84	0.00	35,329.62	17.6 x 0.188	2	28 = 2 x 2 x .232
W5	0.00	117,942.38	73,521.80	79,262.14	17.6 x 0.188	2	31 = 3 x 3 x .227
W5	0.00	117,942.38	73,521.80	79,262.14	17.6 x 0.188	2	31 = 3 x 3 x .227
W4	73,521.80	78,675.84	0.00	35,329.62	17.6 x 0.188	2	28 = 2 x 2 x .232
W3	0.00	297,452.78	220,565.39	243,783.27	22.7 x 0.437	2	44 = 4 x 4 x .437
W2	214,941.06	215,879.05	0.00	169,953.78	30.9 x 0.312	2	41 = 4 x 4 x .312
V1	0.03	21,796.88	8,310.30	10,861.48	3.0 x 0.125	1	20 = 2 x 2 x .125
V2	0.00	21,796.88	8,310.30	10,861.48	3.0 x 0.125	1	20 = 2 x 2 x .125

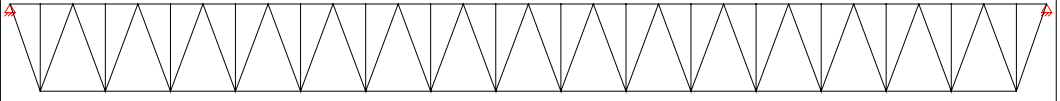


# STRESS ANALYSIS - PAGE 1



Job Number: <b>00-0002</b>	Job Name: <b>LRFD - SJI SUBMITTAL</b>	Date Run: <b>10/8/2006</b>
Location: <b>JUAREZ,</b>	Joist Description: <b>Deep Long Span 84G16N18F</b>	Mark: <b>G05</b>

## Geometry

Base Length: <b>80-0</b>	Working Length: <b>79-8</b>	Joist Depth: <b>84.00</b>	Effective Depth: <b>80.54</b>	BC Panel Length: <b>10 @ 12-0</b>	Shape: <b>Parallel Chords</b>
Variable	Left End	Right End			
BC Panel	2-6	2-6			
TC Panel	2-6	2-6			
First Half	2-6	2-6			
First Diag.	5-0	5-0			
Depth	84.00	84.00			

## Loads

Point Load at Diagonals (lbs)	18,000.00
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## Stress Analysis Summary

Int. Panel TC: 30.00		Max Panel BC: 60.00		Reaction LE: 143,999.98		Reaction RE: 144,000.00		Minimum Shear: 36,000.00		Max TC Comp.: 422,397.72		Max BC Tension 425,750.09	
Member	TC Tension	TC Compression	BC Tension	BC Compression	Web Tension	Web Comp.	Web Length	PP Dist.					
W2	0.00	46,933.08	0.00	0.00	142,925.53	0.00	85.27	0-2					
W3	0.00	46,933.08	97,218.52	0.00	0.00	144,061.20	85.95	2-6					
W4	0.00	140,799.23	97,218.52	0.00	124,853.05	0.00	85.95	5-0					
W5	0.00	140,799.23	184,379.92	0.00	0.00	124,853.04	85.95	7-6					
W6	0.00	221,255.97	184,379.92	0.00	105,644.89	0.00	85.95	10-0					
W7	0.00	221,255.97	258,131.92	0.00	0.00	105,644.88	85.95	12-6					
W8	0.00	288,303.22	258,131.92	0.00	86,436.71	0.00	85.95	15-0					
W9	0.00	288,303.22	318,474.41	0.00	0.00	86,436.73	85.95	17-6					
W10	0.00	341,941.00	318,474.41	0.00	67,228.55	0.00	85.95	20-0					
W11	0.00	341,941.00	365,407.56	0.00	0.00	67,228.55	85.95	22-6					
W12	0.00	382,169.34	365,407.56	0.00	48,020.40	0.00	85.95	25-0					
W13	0.00	382,169.34	398,931.22	0.00	0.00	48,020.40	85.95	27-6					
W14	0.00	408,988.31	398,931.22	0.00	38,416.31	0.00	85.95	30-0					
W15	0.00	408,988.31	419,045.34	0.00	0.00	38,416.31	85.95	32-6					
W16	0.00	422,397.72	419,045.34	0.00	38,416.31	0.00	85.95	35-0					
W17	0.00	422,397.72	425,750.09	0.00	0.00	38,416.31	85.95	37-6					
W17	0.00	422,397.72	425,750.09	0.00	0.00	38,416.31	85.95	40-0					
W16	0.00	422,397.72	419,045.38	0.00	38,416.31	0.00	85.95	42-6					
W15	0.00	408,988.22	419,045.38	0.00	0.00	38,416.31	85.95	45-0					
W14	0.00	408,988.22	398,931.19	0.00	38,416.31	0.00	85.95	47-6					
W13	0.00	382,169.38	398,931.19	0.00	0.00	48,020.41	85.95	50-0					
W12	0.00	382,169.38	365,407.53	0.00	48,020.40	0.00	85.95	52-6					
W11	0.00	341,940.97	365,407.53	0.00	0.00	67,228.57	85.95	55-0					
W10	0.00	341,940.97	318,474.47	0.00	67,228.57	0.00	85.95	57-6					
W9	0.00	288,303.19	318,474.47	0.00	0.00	86,436.72	85.95	60-0					
W8	0.00	288,303.19	258,131.91	0.00	86,436.72	0.00	85.95	62-6					
W7	0.00	221,255.92	258,131.91	0.00	0.00	105,644.88	85.95	65-0					
W6	0.00	221,255.92	184,379.95	0.00	105,644.88	0.00	85.95	67-6					
W5	0.00	140,799.22	184,379.95	0.00	0.00	124,853.03	85.95	70-0					
W4	0.00	140,799.22	97,218.52	0.00	124,853.02	0.00	85.95	72-6					
W3	0.00	46,933.07	97,218.52	0.00	0.00	144,061.17	85.95	75-0					
W2	0.00	46,933.07	0.00	0.00	142,925.55	0.00	85.27	77-6					

## Standard Verticals

Member	Position	Max Tension	Max Comp.	Length
V1	End Panel	0.00	8,447.96	80.54
V2	Interior	0.00	8,447.96	80.54

## STRESS ANALYSIS - PAGE 2



Job Number: <b>00-0002</b>	Job Name: <b>LRFD - SJI SUBMITTAL</b>	Date Run: <b>10/8/2006</b>
Location: <b>JUAREZ,</b>	Joist Description: <b>Deep Long Span 84G16N18F</b>	Mark: <b>G05</b>

## Chord Properties

Chord	Area	Rx	Rz	Ryy	Y	Ix	Q	Material
TC	8.4375	1.8267	1.1734	2.9176	1.7750	28.1549	1.0000	67 = 6 x 6 x .750
BC	5.7500	1.8607	1.1847	2.8698	1.6848	19.9078	0.9607	63 = 6 x 6 x .500

## Axial and Bending Analysis

K:	Fy:	Fb:	Mom of Inertia:	LL 240:	LL 240:	Max Bridg TC:	Max Bridg BC:
<b>1.00</b>	<b>50,000.00</b>	<b>45,000.00</b>	<b>44,412.13</b>	<b>4,922.24</b>	<b>4,922.24</b>	<b>41-4</b>	<b>57-4 3/4</b>

Top Chord Check	End Panel LE	First Panel LE	Interior Panel	First Panel RE	End Panel RE	Gap Between Chords:
Length	28.00	30.00	30.00	30.00	28.00	<b>1.00</b>
Bending Load	0.00	0.00	0.00	0.00	0.00	Min Weld Len 2X: <b>3.0342</b>
Axial Load	46,933.08	46,933.08	422,397.72	46,933.07	46,933.07	Max Load Fillers TC: <b>736,253.06</b>
fa	2,781.22	2,781.22	25,030.98	2,781.22	2,781.22	Max Load no Fillers TC: <b>723,935.50</b>
Maximum K L/r	23.86	25.57	20.56	25.57	23.86	TC OAL/Ryy: <b>327.6645</b>
Fa	43,164.96	42,899.88	43,629.81	42,899.88	43,164.96	BC Stress: <b>37,021.75</b>
F'e	635,587.06	553,666.94	553,666.94	553,666.94	635,587.06	BC L/Rz: <b>50.6436</b>
Cm	0.9987	0.9985	0.9819	0.9985	0.9987	TC Shear Stress: <b>15,073.82</b>
Panel Point Moment	0.00	0.00	0.00	0.00	0.00	BC Shear Stress: <b>22,605.98</b>
Mid Panel Moment	0.00	0.00	0.00	0.00	0.00	
Panel Point fb	0.00	0.00	0.00	0.00	0.00	
Mid Panel fb	0.00	0.00	0.00	0.00	0.00	
Fillers	0	0	0	0	0	
Panel Point Stress	2,781.22	2,781.22	25,030.98	2,781.22	2,781.22	
Mid Panel Stress	0.0644	0.0648	0.5737	0.0648	0.0644	

## Web Design

Member	Web Tension	Allow Tension	Web Comp	Allow Comp	Weld	Qty	Material
W2	142,925.53	144,633.50	0.00	77,807.81	22.8 x 0.281	2	35 = 3 x 3 x .281
W3	0.00	215,879.05	144,061.20	145,585.80	20.7 x 0.312	2	41 = 4 x 4 x .312
W4	124,853.05	129,375.00	0.00	68,248.85	22.4 x 0.250	2	33 = 3 x 3 x .250
W5	0.00	206,069.77	124,853.04	129,482.69	16.3 x 0.344	2	3F = 3 1/2 x 3 1/2 x .344
W6	105,644.89	106,875.00	0.00	42,927.73	25.3 x 0.188	2	2F = 2 1/2 x 2 1/2 x .250
W7	0.00	187,799.05	105,644.88	117,512.36	25.3 x 0.188	2	3E = 3 1/2 x 3 1/2 x .312
W8	86,436.71	91,355.04	0.00	37,009.74	20.7 x 0.188	2	2C = 2 1/2 x 2 1/2 x .212
W9	0.00	187,799.05	86,436.73	117,512.36	20.7 x 0.188	2	3E = 3 1/2 x 3 1/2 x .312
W10	67,228.55	70,017.75	0.00	17,993.16	16.1 x 0.188	2	26 = 2 x 2 x .205
W11	0.00	129,375.00	67,228.55	68,248.85	16.1 x 0.188	2	33 = 3 x 3 x .250
W12	48,020.40	49,639.59	0.00	13,120.17	15.1 x 0.143	2	21 = 2 x 2 x .143
W13	0.00	117,942.38	48,020.40	61,425.60	11.5 x 0.188	2	31 = 3 x 3 x .227
W14	38,416.31	43,593.75	0.00	11,619.17	13.8 x 0.125	2	20 = 2 x 2 x .125
W15	0.00	98,739.00	38,416.31	39,905.32	9.2 x 0.188	2	2E = 2 1/2 x 2 1/2 x .230
W16	38,416.31	43,593.75	0.00	11,619.17	13.8 x 0.125	2	20 = 2 x 2 x .125
W17	0.00	98,739.00	38,416.31	39,905.32	9.2 x 0.188	2	2E = 2 1/2 x 2 1/2 x .230
W17	0.00	98,739.00	38,416.31	39,905.32	9.2 x 0.188	2	2E = 2 1/2 x 2 1/2 x .230
W16	38,416.31	43,593.75	0.00	11,619.17	13.8 x 0.125	2	20 = 2 x 2 x .125
W15	0.00	98,739.00	38,416.31	39,905.32	9.2 x 0.188	2	2E = 2 1/2 x 2 1/2 x .230
W14	38,416.31	43,593.75	0.00	11,619.17	13.8 x 0.125	2	20 = 2 x 2 x .125
W13	0.00	117,942.38	48,020.41	61,425.60	11.5 x 0.188	2	31 = 3 x 3 x .227
W12	48,020.40	49,639.59	0.00	13,120.17	15.1 x 0.143	2	21 = 2 x 2 x .143
W11	0.00	129,375.00	67,228.57	68,248.85	16.1 x 0.188	2	33 = 3 x 3 x .250
W10	67,228.57	70,017.75	0.00	17,993.16	16.1 x 0.188	2	26 = 2 x 2 x .205
W9	0.00	187,799.05	86,436.72	117,512.36	20.7 x 0.188	2	3E = 3 1/2 x 3 1/2 x .312
W8	86,436.72	91,355.04	0.00	37,009.74	20.7 x 0.188	2	2C = 2 1/2 x 2 1/2 x .212
W7	0.00	187,799.05	105,644.88	117,512.36	25.3 x 0.188	2	3E = 3 1/2 x 3 1/2 x .312

# STRESS ANALYSIS - PAGE 1



Job Number: <b>00-0002</b>	Job Name: <b>LRFD - SJI SUBMITTAL</b>	Date Run: <b>10/8/2006</b>
Location: <b>JUAREZ,</b>	Joist Description: <b>Deep Long Span 8K1</b>	Mark: <b>J01</b>

## Geometry

Base Length: <b>14-0</b>	Working Length: <b>13-8</b>	Joist Depth: <b>8.00</b>	Effective Depth: <b>7.23</b>	BC Panel Length: <b>10 @ 12-0</b>	Shape: <b>Parallel Chords</b>
Variable	Left End	Right End			
BC Panel	2-3	2-3			
TC Panel	1-5 1/2	1-5 1/2			
First Half	0-9 1/2	0-9 1/2			
First Diag.	3-0 1/2	3-0 1/2			
Depth	8.00	8.00			

## Loads

Uniform Load in TC (plf)	489.40	Live Load (plf)	286.40
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## Stress Analysis Summary

Int. Panel TC: <b>19.00</b>	Max Panel BC: <b>19.00</b>	Reaction LE: <b>3,146.07</b>	Reaction RE: <b>3,146.07</b>	Minimum Shear: <b>786.52</b>	Max TC Comp.: <b>17,610.84</b>	Max BC Tension <b>17,610.84</b>		
Member	TC Tension	TC Compression	BC Tension	BC Compression	Web Tension	Web Comp.	Web Length	PP Dist.
W2	0.00	9,855.70	0.00	0.00	10,259.14	0.00	26.02	0-2
V1S	0.00	8,985.61	0.00	0.00	0.00	1,181.25	11.94	1-5 1/2
W3	0.00	8,985.61	11,860.69	0.00	0.00	3,612.28	11.94	2-3
W4	0.00	13,777.40	11,860.69	0.00	2,408.19	0.00	11.94	3-0 1/2
W5	0.00	13,777.40	15,694.12	0.00	0.00	2,408.19	11.94	3-10
W6	0.00	16,652.48	15,694.12	0.00	1,299.15	0.00	11.94	4-7 1/2
W7	0.00	16,652.48	17,610.84	0.00	0.00	1,299.15	11.94	5-5
W8	0.00	17,610.84	17,610.84	0.00	1,299.15	1,299.15	11.94	6-2 1/2

\* Symmetrical Joist

# STRESS ANALYSIS - PAGE 2



Job Number: <b>00-0002</b>	Job Name: <b>LRFD - SJI SUBMITTAL</b>	Date Run: <b>10/8/2006</b>
Location: <b>JUAREZ,</b>	Joist Description: <b>Deep Long Span 8K1</b>	Mark: <b>J01</b>

## Chord Properties

Chord	Area	Rx	Rz	Ryy	Y	Ix	Q	Material
TC	0.3151	0.4675	0.2972	0.8132	0.4154	0.0689	0.9050	1C = 1 1/2 x 1 1/2 x .109
BC	0.2969	0.3847	0.2457	0.7200	0.3586	0.0439	1.0000	18 = 1 1/4 x 1 1/4 x .125

## Axial and Bending Analysis

K: <b>1.00</b>	Fy: <b>50,000.00</b>	Fb: <b>45,000.00</b>	Mom of Inertia: <b>16.08</b>	LL 240: <b>352.94</b>	LL 240: <b>352.94</b>	Max Bridg TC: <b>9-9 7/8</b>	Max Bridg BC: <b>14-4 3/4</b>
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Top Chord Check	End Panel LE	First Panel LE	Interior Panel	First Panel RE	End Panel RE	Gap Between Chords: <b>0.50</b>
Length	15.50	19.00	19.00	19.00	15.50	Min Weld Len 2X: <b>0.5000</b>
Bending Load	324.00	-	0.00	-	324.00	Max Load Fillers TC: <b>22,545.15</b>
Axial Load	9,855.70	-	17,610.84	-	9,855.70	Max Load no Fillers TC: <b>19,583.27</b>
fa	15,638.06	-	27,943.15	-	15,638.06	TC OAL/Ryy: <b>201.6830</b>
Maximum K L/r	52.16	-	44.27	-	52.16	BC Stress: <b>29,660.36</b>
Fa	34,015.86	-	35,772.43	-	34,015.86	BC L/Rz: <b>77.3209</b>
F'e	135,824.28	-	90,392.76	-	135,824.28	TC Shear Stress: <b>11,706.02</b>
Cm	0.9655	-	0.8763	-	0.9655	BC Shear Stress: <b>12,328.11</b>
Panel Point Moment	811.81	-	0.00	-	811.81	
Mid Panel Moment	455.74	-	0.00	-	455.74	
Panel Point fb	6393.59	-	0.00	-	6393.59	
Mid Panel fb	1374.51	-	0.00	-	1374.51	
Fillers	0	-	0	-	0	
Panel Point Stress	22,031.65	-	27,943.15	-	22,031.65	
Mid Panel Stress	0.4966	-	0.7811	-	0.4966	

## Web Design

Member	Web Tension	Allow Tension	Web Comp	Allow Comp	Weld	Qty	Material
W2	10,259.14	12,425.24	0.00	4,733.58	2.5 x 0.185	1	R9 = round 5/8
V1S	0.00	8,835.73	1,181.25	6,214.59	2.0 x 0.027	1	R1 = round 1/2
W3	0.00	8,835.73	3,612.28	6,214.59	2.0 x 0.081	1	R1 = round 1/2
W4	2,408.19	8,835.73	0.00	6,214.59	2.0 x 0.054	1	R1 = round 1/2
W5	0.00	8,835.73	2,408.19	6,214.59	2.0 x 0.054	1	R1 = round 1/2
W6	1,299.15	8,835.73	0.00	6,214.59	2.0 x 0.029	1	R1 = round 1/2
W7	0.00	8,835.73	1,299.15	6,214.59	2.0 x 0.029	1	R1 = round 1/2
W8	1,299.15	8,835.73	1,299.15	6,214.59	2.0 x 0.029	1	R1 = round 1/2

\* Symmetrical Joist

# STRESS ANALYSIS - PAGE 1



Job Number: <b>00-0002</b>	Job Name: <b>LRFD - SJI SUBMITTAL</b>	Date Run: <b>10/8/2006</b>
Location: <b>JUAREZ,</b>	Joist Description: <b>Deep Long Span 10K1</b>	Mark: <b>J02</b>

## Geometry

Base Length: <b>12-0</b>	Working Length: <b>11-8</b>	Joist Depth: <b>10.00</b>	Effective Depth: <b>9.23</b>	BC Panel Length: <b>10 @ 12-0</b>	Shape: <b>Parallel Chords</b>
Variable	Left End	Right End			
BC Panel	2-0 1/2	2-0 1/2			
TC Panel	1-3	1-3			
First Half	0-9 1/2	0-9 1/2			
First Diag.	2-10	2-10			
Depth	10.00	10.00			

## Loads

Uniform Load in TC (plf)	861.00	Live Load (plf)	728.00
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## Stress Analysis Summary

Int. Panel TC: <b>19.00</b>		Max Panel BC: <b>19.00</b>		Reaction LE: <b>4,911.67</b>		Reaction RE: <b>4,911.67</b>		Minimum Shear: <b>1,227.92</b>		Max TC Comp.: <b>17,946.48</b>		Max BC Tension <b>18,632.86</b>	
Member	TC Tension	TC Compression	BC Tension	BC Compression	Web Tension	Web Comp.	Web Length	PP Dist.					
W2	0.00	10,866.00	0.00	0.00	11,744.03	0.00	24.32	0-2					
V1S	0.00	9,710.00	0.00	0.00	0.00	1,701.16	13.24	1-3					
W3	0.00	9,710.00	13,141.87	0.00	0.00	4,783.94	13.24	2-0 1/2					
W4	0.00	15,200.99	13,141.87	0.00	2,870.36	0.00	13.24	2-10					
W5	0.00	15,200.99	17,260.11	0.00	0.00	2,870.36	13.24	3-7 1/2					
W6	0.00	17,946.48	17,260.11	0.00	1,762.50	0.00	13.24	4-5					
W7	0.00	17,946.48	18,632.86	0.00	0.00	1,762.50	13.24	5-2 1/2					

\* Symmetrical Joist

# STRESS ANALYSIS - PAGE 2



Job Number: <b>00-0002</b>	Job Name: <b>LRFD - SJI SUBMITTAL</b>	Date Run: <b>10/8/2006</b>
Location: <b>JUAREZ,</b>	Joist Description: <b>Deep Long Span 10K1</b>	Mark: <b>J02</b>

## Chord Properties

Chord	Area	Rx	Rz	Ryy	Y	Ix	Q	Material
TC	0.3151	0.4675	0.2972	0.8132	0.4154	0.0689	0.9050	1C = 1 1/2 x 1 1/2 x .109
BC	0.2969	0.3847	0.2457	0.7200	0.3586	0.0439	1.0000	18 = 1 1/4 x 1 1/4 x .125

## Axial and Bending Analysis

K: <b>1.00</b>	Fy: <b>50,000.00</b>	Fb: <b>45,000.00</b>	Mom of Inertia: <b>26.14</b>	LL 240: <b>922.35</b>	LL 240: <b>922.35</b>	Max Bridg TC: <b>9-9 7/8</b>	Max Bridg BC: <b>14-4 3/4</b>
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Top Chord Check	End Panel LE	First Panel LE	Interior Panel	First Panel RE	End Panel RE	Gap Between Chords: <b>0.50</b>
Length	13.00	19.00	19.00	19.00	13.00	Min Weld Len 2X: <b>0.5000</b>
Bending Load	550.00	-	0.00	-	550.00	Max Load Fillers TC: <b>22,545.15</b>
Axial Load	10,866.00	-	17,946.48	-	10,866.00	Max Load no Fillers TC: <b>19,583.27</b>
fa	17,241.10	-	28,475.72	-	17,241.10	TC OAL/Ryy: <b>172.1684</b>
Maximum K L/r	43.75	-	44.27	-	43.75	BC Stress: <b>31,381.65</b>
Fa	35,881.57	-	35,772.43	-	35,881.57	BC L/Rz: <b>77.3209</b>
F'e	193,087.47	-	90,392.76	-	193,087.47	TC Shear Stress: <b>16,123.65</b>
Cm	0.9732	-	0.8740	-	0.9732	BC Shear Stress: <b>16,941.52</b>
Panel Point Moment	1197.93	-	0.00	-	1197.93	
Mid Panel Moment	461.90	-	0.00	-	461.90	
Panel Point fb	9434.55	-	0.00	-	9434.55	
Mid Panel fb	1393.09	-	0.00	-	1393.09	
Fillers	0	-	0	-	0	
Panel Point Stress	26,675.65	-	28,475.72	-	26,675.65	
Mid Panel Stress	0.5171	-	0.7960	-	0.5171	

## Web Design

Member	Web Tension	Allow Tension	Web Comp	Allow Comp	Weld	Qty	Material
W2	11,744.03	12,425.24	0.00	4,633.71	2.9 x 0.185	1	R9 = round 5/8
V1S	0.00	8,835.73	1,701.16	5,323.06	2.0 x 0.038	1	R1 = round 1/2
W3	0.00	8,835.73	4,783.94	5,323.06	2.0 x 0.107	1	R1 = round 1/2
W4	2,870.36	8,835.73	0.00	5,323.06	2.0 x 0.064	1	R1 = round 1/2
W5	0.00	8,835.73	2,870.36	5,323.06	2.0 x 0.064	1	R1 = round 1/2
W6	1,762.50	8,835.73	0.00	5,323.06	2.0 x 0.040	1	R1 = round 1/2
W7	0.00	8,835.73	1,762.50	5,323.06	2.0 x 0.040	1	R1 = round 1/2

\* Symmetrical Joist

# STRESS ANALYSIS - PAGE 1



Job Number: <b>00-0002</b>	Job Name: <b>LRFD - SJI SUBMITTAL</b>	Date Run: <b>10/8/2006</b>
Location: <b>JUAREZ,</b>	Joist Description: <b>Deep Long Span 12K5</b>	Mark: <b>J03</b>

## Geometry

Base Length: <b>20-0</b>	Working Length: <b>19-8</b>	Joist Depth: <b>12.00</b>	Effective Depth: <b>11.15</b>	BC Panel Length: <b>10 @ 12-0</b>	Shape: <b>Parallel Chords</b>
Variable	Left End	Right End			
BC Panel	2-1	2-1			
TC Panel	1-3 1/2	1-3 1/2			
First Half	0-9 1/2	0-9 1/2			
First Diag.	2-10 1/2	2-10 1/2			
Depth	12.00	12.00			

## Loads

Uniform Load in TC (plf)	618.60	Live Load (plf)	368.00
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## Stress Analysis Summary

Int. Panel TC: 19.00		Max Panel BC: 19.00		Reaction LE: 5,730.87		Reaction RE: 5,730.87		Minimum Shear: 1,432.72		Max TC Comp.: 30,120.42		Max BC Tension 30,120.42	
Member	TC Tension	TC Compresion	BC Tension	BC Compression	Web Tension	Web Comp.	Web Length	PP Dist.					
W2	0.00	11,142.41	0.00	0.00	12,383.30	0.00	25.56	0-2					
V1S	0.00	10,470.16	0.00	0.00	0.00	1,187.31	14.65	1-3 1/2					
W3	0.00	10,470.16	14,400.21	0.00	0.00	6,060.76	14.65	2-1					
W4	0.00	17,544.25	14,400.21	0.00	4,848.61	0.00	14.65	2-10 1/2					
W5	0.00	17,544.25	20,688.30	0.00	0.00	4,848.61	14.65	3-8					
W6	0.00	23,046.33	20,688.30	0.00	3,636.45	0.00	14.65	4-5 1/2					
W7	0.00	23,046.33	25,404.36	0.00	0.00	3,636.45	14.65	5-3					
W8	0.00	26,976.38	25,404.36	0.00	2,424.30	0.00	14.65	6-0 1/2					
W9	0.00	26,976.38	28,548.40	0.00	0.00	2,424.30	14.65	6-10					
W10	0.00	29,334.41	28,548.40	0.00	1,882.02	0.00	14.65	7-7 1/2					
W11	0.00	29,334.41	30,120.42	0.00	0.00	1,882.02	14.65	8-5					
W12	0.00	30,120.42	30,120.42	0.00	1,882.02	1,882.02	14.65	9-2 1/2					

\* Symmetrical Joist

# STRESS ANALYSIS - PAGE 2



Job Number: <b>00-0002</b>	Job Name: <b>LRFD - SJI SUBMITTAL</b>	Date Run: <b>10/8/2006</b>
Location: <b>JUAREZ,</b>	Joist Description: <b>Deep Long Span 12K5</b>	Mark: <b>J03</b>

## Chord Properties

Chord	Area	Rx	Rz	Ryy	Y	Ix	Q	Material
TC	0.3950	0.4634	0.2955	0.8195	0.4259	0.0848	0.9964	1G = 1 1/2 x 1 1/2 x .138
BC	0.3594	0.4652	0.2962	0.8166	0.4212	0.0778	0.9607	1E = 1 1/2 x 1 1/2 x .125

## Axial and Bending Analysis

K: <b>1.00</b>	Fy: <b>50,000.00</b>	Fb: <b>45,000.00</b>	Mom of Inertia: <b>46.97</b>	LL 240: <b>346.05</b>	LL 240: <b>346.05</b>	Max Bridg TC: <b>9-10 7/8</b>	Max Bridg BC: <b>16-4</b>
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Top Chord Check	End Panel LE	First Panel LE	Interior Panel	First Panel RE	End Panel RE	Gap Between Chords: <b>0.50</b>
Length	13.50	19.00	19.00	19.00	13.50	Min Weld Len 2X: <b>0.5000</b>
Bending Load	409.00	-	0.00	-	409.00	Max Load Fillers TC: <b>30,773.67</b>
Axial Load	11,142.41	-	30,120.42	-	11,142.41	Max Load no Fillers TC: <b>26,206.45</b>
fa	14,105.88	-	38,131.36	-	14,105.88	TC OAL/Ryy: <b>287.9844</b>
Maximum K L/r	45.69	-	43.93	-	45.69	BC Stress: <b>41,906.67</b>
Fa	38,513.41	-	38,958.35	-	38,513.41	BC L/Rz: <b>64.1486</b>
F'e	175,917.20	-	88,811.40	-	175,917.20	TC Shear Stress: <b>14,834.69</b>
Cm	0.9759	-	0.8283	-	0.9759	BC Shear Stress: <b>16,360.79</b>
Panel Point Moment	913.43	-	0.00	-	913.43	
Mid Panel Moment	386.91	-	0.00	-	386.91	
Panel Point fb	5785.06	-	0.00	-	5785.06	
Mid Panel fb	971.69	-	0.00	-	971.69	
Fillers	0	-	5	-	0	
Panel Point Stress	19,890.94	-	38,131.36	-	19,890.94	
Mid Panel Stress	0.3893	-	0.9788	-	0.3893	

## Web Design

Member	Web Tension	Allow Tension	Web Comp	Allow Comp	Weld	Qty	Material
W2	12,383.30	12,425.24	0.00	3,976.94	3.0 x 0.185	1	R9 = round 5/8
V1S	0.00	11,182.72	1,187.31	6,669.77	2.0 x 0.027	1	R5 = round 9/16
W3	0.00	11,182.72	6,060.76	6,669.77	2.0 x 0.136	1	R5 = round 9/16
W4	4,848.61	11,182.72	0.00	6,669.77	2.0 x 0.109	1	R5 = round 9/16
W5	0.00	11,182.72	4,848.61	6,669.77	2.0 x 0.109	1	R5 = round 9/16
W6	3,636.45	8,835.73	0.00	4,593.99	2.0 x 0.082	1	R1 = round 1/2
W7	0.00	8,835.73	3,636.45	4,593.99	2.0 x 0.082	1	R1 = round 1/2
W8	2,424.30	8,835.73	0.00	4,593.99	2.0 x 0.054	1	R1 = round 1/2
W9	0.00	8,835.73	2,424.30	4,593.99	2.0 x 0.054	1	R1 = round 1/2
W10	1,882.02	8,835.73	0.00	4,593.99	2.0 x 0.042	1	R1 = round 1/2
W11	0.00	8,835.73	1,882.02	4,593.99	2.0 x 0.042	1	R1 = round 1/2
W12	1,882.02	8,835.73	1,882.02	4,593.99	2.0 x 0.042	1	R1 = round 1/2

\* Symmetrical Joist



# STRESS ANALYSIS - PAGE 1



Job Number: <b>00-0002</b>	Job Name: <b>LRFD - SJI SUBMITTAL</b>	Date Run: <b>10/8/2006</b>
Location: <b>JUAREZ,</b>	Joist Description: <b>Deep Long Span 14K4</b>	Mark: <b>J04</b>

## Geometry

Base Length: <b>18-0</b>	Working Length: <b>17-8</b>	Joist Depth: <b>14.00</b>	Effective Depth: <b>13.16</b>	BC Panel Length: <b>10 @ 12-0</b>	Shape: <b>Parallel Chords</b>
Variable	Left End	Right End			
BC Panel	1-10 1/2	1-10 1/2			
TC Panel	1-1	1-1			
First Half	0-9 1/2	0-9 1/2			
First Diag.	2-8	2-8			
Depth	14.00	14.00			

## Loads

Uniform Load in TC (plf)	821.40	Live Load (plf)	635.20
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## Stress Analysis Summary

Int. Panel TC: 19.00		Max Panel BC: 19.00	Reaction LE: 7,020.73	Reaction RE: 7,020.73	Minimum Shear: 1,755.18	Max TC Comp.: 27,823.48	Max BC Tension 28,277.74	
Member	TC Tension	TC Compression	BC Tension	BC Compression	Web Tension	Web Comp.	Web Length	PP Dist.
W2	0.00	10,370.10	0.00	0.00	12,322.63	0.00	24.36	0-2
V1S	0.00	9,652.84	0.00	0.00	0.00	1,364.48	16.23	1-1
W3	0.00	9,652.84	13,741.23	0.00	0.00	6,984.55	16.23	1-10 1/2
W4	0.00	16,921.09	13,741.23	0.00	5,432.43	0.00	16.23	2-8
W5	0.00	16,921.09	20,100.95	0.00	0.00	5,432.43	16.23	3-5 1/2
W6	0.00	22,372.29	20,100.95	0.00	3,880.31	0.00	16.23	4-3
W7	0.00	22,372.29	24,643.62	0.00	0.00	3,880.31	16.23	5-0 1/2
W8	0.00	26,006.41	24,643.62	0.00	2,328.18	0.00	16.23	5-10
W9	0.00	26,006.41	27,369.21	0.00	0.00	2,328.18	16.23	6-7 1/2
W10	0.00	27,823.48	27,369.21	0.00	2,164.80	0.00	16.23	7-5
W11	0.00	27,823.48	28,277.74	0.00	0.00	2,164.80	16.23	8-2 1/2

\* Symmetrical Joist

# STRESS ANALYSIS - PAGE 2



Job Number: <b>00-0002</b>	Job Name: <b>LRFD - SJ SUBMITTAL</b>	Date Run: <b>10/8/2006</b>
Location: <b>JUAREZ,</b>	Joist Description: <b>Deep Long Span 14K4</b>	Mark: <b>J04</b>

## Chord Properties

Chord	Area	Rx	Rz	Ryy	Y	Ix	Q	Material
TC	0.3950	0.4634	0.2955	0.8195	0.4259	0.0848	0.9964	1G = 1 1/2 x 1 1/2 x .138
BC	0.3151	0.4675	0.2972	0.8132	0.4154	0.0689	0.9050	1C = 1 1/2 x 1 1/2 x .109

## Axial and Bending Analysis

K: <b>1.00</b>	Fy: <b>50,000.00</b>	Fb: <b>45,000.00</b>	Mom of Inertia: <b>60.85</b>	LL 240: <b>618.45</b>	LL 240: <b>618.45</b>	Max Bridg TC: <b>9-10 7/8</b>	Max Bridg BC: <b>16-3 1/8</b>
Top Chord Check	End Panel LE	First Panel LE	Interior Panel	First Panel RE	End Panel RE	Gap Between Chords: <b>0.50</b>	
Length	11.00	19.00	19.00	19.00	11.00	Min Weld Len 2X: <b>0.5000</b>	
Bending Load	530.00	-	0.00	-	530.00	Max Load Fillers TC: <b>30,773.67</b>	
Axial Load	10,370.10	-	27,823.48	-	10,370.10	Max Load no Fillers TC: <b>26,206.45</b>	
fa	13,128.17	-	35,223.52	-	13,128.17	TC OAL/Ryy: <b>258.6979</b>	
Maximum K L/r	37.23	-	43.93	-	37.23	BC Stress: <b>44,868.35</b>	
Fa	40,533.13	-	38,958.35	-	40,533.13	BC L/Rz: <b>63.9407</b>	
F'e	264,966.22	-	88,811.40	-	264,966.22	TC Shear Stress: <b>17,366.68</b>	
Cm	0.9851	-	0.8414	-	0.9851	BC Shear Stress: <b>21,955.80</b>	
Panel Point Moment	1064.25	-	0.00	-	1064.25		
Mid Panel Moment	241.86	-	0.00	-	241.86		
Panel Point fb	6740.28	-	0.00	-	6740.28		
Mid Panel fb	607.43	-	0.00	-	607.43		
Fillers	0	-	2	-	0		
Panel Point Stress	19,868.45	-	35,223.52	-	19,868.45		
Mid Panel Stress	0.3379	-	0.9041	-	0.3379		

## Web Design

Member	Web Tension	Allow Tension	Web Comp	Allow Comp	Weld	Qty	Material
W2	12,322.63	12,425.24	0.00	4,080.59	3.0 x 0.185	1	R9 = round 5/8
V1S	0.00	13,805.83	1,364.48	7,955.24	2.0 x 0.031	1	R9 = round 5/8
W3	0.00	13,805.83	6,984.55	7,955.24	2.0 x 0.157	1	R9 = round 5/8
W4	5,432.43	13,805.83	0.00	7,955.24	2.0 x 0.122	1	R9 = round 5/8
W5	0.00	13,805.83	5,432.43	7,955.24	2.0 x 0.122	1	R9 = round 5/8
W6	3,880.31	13,805.83	0.00	7,955.24	2.0 x 0.087	1	R9 = round 5/8
W7	0.00	13,805.83	3,880.31	7,955.24	2.0 x 0.087	1	R9 = round 5/8
W8	2,328.18	8,835.73	0.00	3,733.92	2.0 x 0.052	1	R1 = round 1/2
W9	0.00	8,835.73	2,328.18	3,733.92	2.0 x 0.052	1	R1 = round 1/2
W10	2,164.80	8,835.73	0.00	3,733.92	2.0 x 0.049	1	R1 = round 1/2
W11	0.00	8,835.73	2,164.80	3,733.92	2.0 x 0.049	1	R1 = round 1/2

\* Symmetrical Joist

# STRESS ANALYSIS - PAGE 1



Job Number: <b>00-0002</b>	Job Name: <b>LRFD - SJI SUBMITTAL</b>	Date Run: <b>10/8/2006</b>
Location: <b>JUAREZ,</b>	Joist Description: <b>Deep Long Span 16K7</b>	Mark: <b>J05</b>

## Geometry

Base Length: <b>30-0</b>	Working Length: <b>29-8</b>	Joist Depth: <b>16.00</b>	Effective Depth: <b>15.12</b>	BC Panel Length: <b>10 @ 12-0</b>	Shape: <b>Parallel Chords</b>
Variable	Left End	Right End			
BC Panel	2-4	2-4			
TC Panel	1-6 1/2	1-6 1/2			
First Half	0-9 1/2	0-9 1/2			
First Diag.	3-1 1/2	3-1 1/2			
Depth	16.00	16.00			

## Loads

Uniform Load in TC (plf)	444.60	Live Load (plf)	241.60
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## Stress Analysis Summary

Int. Panel TC: 19.00		Max Panel BC: 19.00		Reaction LE: 6,164.73		Reaction RE: 6,164.73		Minimum Shear: 1,541.18		Max TC Comp.: 36,174.19		Max BC Tension 36,174.20	
Member	TC Tension	TC Compression	BC Tension	BC Compression	Web Tension	Web Comp.	Web Length	PP Dist.					
W2	0.00	10,106.73	0.00	0.00	11,692.25	0.00	30.08	0-2					
V1S	0.00	9,720.59	0.00	0.00	0.00	906.83	17.86	1-6 1/2					
W3	0.00	9,720.59	13,027.29	0.00	0.00	6,216.65	17.86	2-4					
W4	0.00	15,920.65	13,027.29	0.00	5,439.57	0.00	17.86	3-1 1/2					
W5	0.00	15,920.65	18,814.01	0.00	0.00	5,439.57	17.86	3-11					
W6	0.00	21,294.04	18,814.01	0.00	4,662.49	0.00	17.86	4-8 1/2					
W7	0.00	21,294.04	23,774.07	0.00	0.00	4,662.49	17.86	5-6					
W8	0.00	25,840.75	23,774.07	0.00	3,885.41	0.00	17.86	6-3 1/2					
W9	0.00	25,840.75	27,907.44	0.00	0.00	3,885.41	17.86	7-1					
W10	0.00	29,560.79	27,907.44	0.00	3,108.33	0.00	17.86	7-10 1/2					
W11	0.00	29,560.79	31,214.14	0.00	0.00	3,108.33	17.86	8-8					
W12	0.00	32,454.15	31,214.14	0.00	2,331.25	0.00	17.86	9-5 1/2					
W13	0.00	32,454.15	33,694.17	0.00	0.00	2,331.25	17.86	10-3					
W14	0.00	34,520.84	33,694.17	0.00	1,820.01	0.00	17.86	11-0 1/2					
W15	0.00	34,520.84	35,347.52	0.00	0.00	1,820.01	17.86	11-10					
W16	0.00	35,760.86	35,347.52	0.00	1,820.01	0.00	17.86	12-7 1/2					
W17	0.00	35,760.86	36,174.20	0.00	0.00	1,820.01	17.86	13-5					
W18	0.00	36,174.19	36,174.20	0.00	1,820.01	1,820.01	17.86	14-2 1/2					

\* Symmetrical Joist

# STRESS ANALYSIS - PAGE 2



Job Number: <b>00-0002</b>	Job Name: <b>LRFD - SJ SUBMITTAL</b>	Date Run: <b>10/8/2006</b>
Location: <b>JUAREZ,</b>	Joist Description: <b>Deep Long Span 16K7</b>	Mark: <b>J05</b>

## Chord Properties

Chord	Area	Rx	Rz	Ryy	Y	Ix	Q	Material
TC	0.5260	0.4567	0.2934	0.8305	0.4436	0.1097	1.0000	1K = 1 1/2 x 1 1/2 x .187
BC	0.4437	0.4609	0.2946	0.8235	0.4324	0.0942	1.0000	1J = 1 1/2 x 1 1/2 x .156

## Axial and Bending Analysis

K: <b>1.00</b>	Fy: <b>50,000.00</b>	Fb: <b>45,000.00</b>	Mom of Inertia: <b>110.31</b>	LL 240: <b>236.75</b>	LL 240: <b>236.75</b>	Max Bridg TC: <b>10-0 3/8</b>	Max Bridg BC: <b>16-5 5/8</b>
Top Chord Check	End Panel LE	First Panel LE	Interior Panel	First Panel RE	End Panel RE	Gap Between Chords: <b>0.50</b>	
Length	16.50	19.00	19.00	19.00	16.50	Min Weld Len 2X: <b>0.5000</b>	
Bending Load	296.00	-	0.00	-	296.00	Max Load Fillers TC: <b>41,264.91</b>	
Axial Load	10,106.73	-	36,174.19	-	10,106.73	Max Load no Fillers TC: <b>34,838.47</b>	
fa	9,606.59	-	34,384.09	-	9,606.59	TC OAL/Ryy: <b>428.6808</b>	
Maximum K L/r	56.24	-	43.35	-	56.24	BC Stress: <b>40,767.56</b>	
Fa	35,707.79	-	39,222.89	-	35,707.79	BC L/Rz: <b>64.4953</b>	
F'e	114,426.70	-	86,295.48	-	114,426.70	TC Shear Stress: <b>11,527.88</b>	
Cm	0.9748	-	0.8406	-	0.9748	BC Shear Stress: <b>13,792.64</b>	
Panel Point Moment	791.06	-	0.00	-	791.06		
Mid Panel Moment	490.50	-	0.00	-	490.50		
Panel Point fb	3807.70	-	0.00	-	3807.70		
Mid Panel fb	991.33	-	0.00	-	991.33		
Fillers	0	-	3	-	0		
Panel Point Stress	13,414.29	-	34,384.09	-	13,414.29		
Mid Panel Stress	0.2925	-	0.8766	-	0.2925		

## Web Design

Member	Web Tension	Allow Tension	Web Comp	Allow Comp	Weld	Qty	Material
W2	11,692.25	12,425.24	0.00	2,531.36	2.8 x 0.185	1	R9 = round 5/8
V1S	0.00	13,805.83	906.83	6,815.87	2.0 x 0.020	1	R9 = round 5/8
W3	0.00	13,805.83	6,216.65	6,815.87	2.0 x 0.140	1	R9 = round 5/8
W4	5,439.57	13,805.83	0.00	6,815.87	2.0 x 0.122	1	R9 = round 5/8
W5	0.00	13,805.83	5,439.57	6,815.87	2.0 x 0.122	1	R9 = round 5/8
W6	4,662.49	13,805.83	0.00	6,815.87	2.0 x 0.105	1	R9 = round 5/8
W7	0.00	13,805.83	4,662.49	6,815.87	2.0 x 0.105	1	R9 = round 5/8
W8	3,885.41	13,805.83	0.00	6,815.87	2.0 x 0.087	1	R9 = round 5/8
W9	0.00	13,805.83	3,885.41	6,815.87	2.0 x 0.087	1	R9 = round 5/8
W10	3,108.33	13,805.83	0.00	6,815.87	2.0 x 0.070	1	R9 = round 5/8
W11	0.00	13,805.83	3,108.33	6,815.87	2.0 x 0.070	1	R9 = round 5/8
W12	2,331.25	8,835.73	0.00	2,940.80	2.0 x 0.052	1	R1 = round 1/2
W13	0.00	8,835.73	2,331.25	2,940.80	2.0 x 0.052	1	R1 = round 1/2
W14	1,820.01	8,835.73	0.00	2,940.80	2.0 x 0.041	1	R1 = round 1/2
W15	0.00	8,835.73	1,820.01	2,940.80	2.0 x 0.041	1	R1 = round 1/2
W16	1,820.01	8,835.73	0.00	2,940.80	2.0 x 0.041	1	R1 = round 1/2
W17	0.00	8,835.73	1,820.01	2,940.80	2.0 x 0.041	1	R1 = round 1/2
W18	1,820.01	8,835.73	1,820.01	2,940.80	2.0 x 0.041	1	R1 = round 1/2

\* Symmetrical Joist

# STRESS ANALYSIS - PAGE 1



Job Number: <b>00-0002</b>	Job Name: <b>LRFD - SJ SUBMITTAL</b>	Date Run: <b>10/8/2006</b>
Location: <b>JUAREZ,</b>	Joist Description: <b>Deep Long Span 18K3</b>	Mark: <b>J06</b>

## Geometry

Base Length: <b>30-0</b>	Working Length: <b>29-8</b>	Joist Depth: <b>18.00</b>	Effective Depth: <b>17.16</b>	BC Panel Length: <b>10 @ 12-0</b>	Shape: <b>Parallel Chords</b>
Variable	Left End	Right End			
BC Panel	3-0	3-0			
TC Panel	2-7	2-7			
First Half	2-0	2-0			
First Diag.	5-0	5-0			
Depth	18.00	18.00			

## Loads

Uniform Load in TC (plf)	308.80	Live Load (plf)	196.80
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## Stress Analysis Summary

Int. Panel TC: <b>24.00</b>		Max Panel BC: <b>48.00</b>		Reaction LE: <b>4,343.20</b>		Reaction RE: <b>4,343.20</b>		Minimum Shear: <b>1,085.80</b>		Max TC Comp.: <b>22,521.40</b>		Max BC Tension <b>22,111.97</b>	
Member	TC Tension	TC Compression	BC Tension	BC Compression	Web Tension	Web Comp.	Web Length	PP Dist.					
W2	0.00	7,902.82	0.00	0.00	8,852.68	0.00	38.09	0-2					
V1S	0.00	7,696.68	0.00	0.00	0.00	849.62	17.88	2-7					
W3	0.00	7,696.68	12,285.69	0.00	0.00	5,641.74	29.51	3-0					
W4	0.00	15,970.55	12,285.69	0.00	4,530.17	0.00	29.51	5-0					
W5	0.00	15,970.55	18,836.55	0.00	0.00	3,523.47	29.51	7-0					
W6	0.00	20,883.69	18,836.55	0.00	2,516.76	0.00	29.51	9-0					
W7	0.00	20,883.69	22,111.97	0.00	0.00	1,866.60	29.51	11-0					
W8	0.00	22,521.40	22,111.97	0.00	1,866.60	0.00	29.51	13-0					

\* Symmetrical Joist

## Standard Verticals

Member	Position	Max Tension	Max Comp.	Length
V2	Interior	0.00	698.21	17.16

# STRESS ANALYSIS - PAGE 2



Job Number: <b>00-0002</b>	Job Name: <b>LRFD - SJI SUBMITTAL</b>	Date Run: <b>10/8/2006</b>
Location: <b>JUAREZ,</b>	Joist Description: <b>Deep Long Span 18K3</b>	Mark: <b>J06</b>

## Chord Properties

Chord	Area	Rx	Rz	Ryy	Y	Ix	Q	Material
TC	0.3594	0.4652	0.2962	1.0320	0.4212	0.0778	0.9607	1E = 1 1/2 x 1 1/2 x .125
BC	0.3151	0.4675	0.2972	1.0278	0.4154	0.0689	0.9050	1C = 1 1/2 x 1 1/2 x .109

## Axial and Bending Analysis

K: <b>1.00</b>	Fy: <b>50,000.00</b>	Fb: <b>45,000.00</b>	Mom of Inertia: <b>99.07</b>	LL 240: <b>212.62</b>	LL 240: <b>212.62</b>	Max Bridg TC: <b>12-5 5/8</b>	Max Bridg BC: <b>20-6 5/8</b>
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Top Chord Check	End Panel LE	First Panel LE	Interior Panel	First Panel RE	End Panel RE	Gap Between Chords: <b>1.00</b>
Length	29.00	29.00	24.00	29.00	29.00	Min Weld Len 2X: <b>0.5000</b>
Bending Load	203.00	203.00	0.00	203.00	203.00	Max Load Fillers TC: <b>25,773.71</b>
Axial Load	7,902.82	7,696.68	22,521.40	7,696.68	7,902.82	Max Load no Fillers TC: <b>19,592.05</b>
fa	10,995.23	10,708.43	31,334.12	10,708.43	10,995.23	TC OAL/Ryy: <b>344.9666</b>
Maximum K L/r	97.91	97.91	51.59	97.91	97.91	BC Stress: <b>35,085.12</b>
Fa	22,046.98	22,046.98	35,859.07	22,046.98	22,046.98	BC L/Rz: <b>161.5344</b>
F'e	38,423.01	38,423.01	56,100.26	38,423.01	38,423.01	TC Shear Stress: <b>11,974.94</b>
Cm	0.9142	0.9164	0.7766	0.9164	0.9142	BC Shear Stress: <b>13,716.75</b>
Panel Point Moment	1547.17	1547.29	0.00	1547.29	1547.17	
Mid Panel Moment	1088.91	556.21	0.00	556.21	1088.91	
Panel Point fb	10731.65	10732.49	0.00	10732.49	10731.65	
Mid Panel fb	2948.90	1506.29	0.00	1506.29	2948.90	
Fillers	0	0	6	0	0	
Panel Point Stress	21,726.88	21,440.92	31,334.12	21,440.92	21,726.88	
Mid Panel Stress	0.5861	0.5300	0.8738	0.5300	0.5861	

## Web Design

Member	Web Tension	Allow Tension	Web Comp	Allow Comp	Weld	Qty	Material
W2	8,852.68	24,353.48	0.00	5,867.13	2.0 x 0.199	1	RH = round 7/8
W3	0.00	14,180.35	5,641.74	6,261.88	2.3 x 0.109	1	1C = 1 1/2 x 1 1/2 x .109
W4	4,530.17	9,275.36	0.00	2,695.05	2.0 x 0.109	1	10 = 1 x 1 x .109
W5	0.00	11,727.85	3,523.47	5,245.65	2.0 x 0.109	1	15 = 1 1/4 x 1 1/4 x .109
W6	2,516.76	9,275.36	0.00	2,695.05	2.0 x 0.109	1	10 = 1 x 1 x .109
W7	0.00	9,275.36	1,866.60	2,695.05	2.0 x 0.109	1	10 = 1 x 1 x .109
W8	1,866.60	9,275.36	0.00	2,695.05	2.0 x 0.109	1	10 = 1 x 1 x .109
V1	0.00	9,275.36	849.62	5,833.46	2.0 x 0.109	1	10 = 1 x 1 x .109
V2	0.00	9,275.36	698.21	6,048.97	2.0 x 0.109	1	10 = 1 x 1 x .109

\* Symmetrical Joist

# STRESS ANALYSIS - PAGE 1



Job Number: <b>00-0002</b>	Job Name: <b>LRFD - SJI SUBMITTAL</b>	Date Run: <b>10/8/2006</b>
Location: <b>JUAREZ,</b>	Joist Description: <b>Deep Long Span 20K3</b>	Mark: <b>J07</b>

## Geometry

Base Length: <b>32-0</b>	Working Length: <b>31-8</b>	Joist Depth: <b>20.00</b>	Effective Depth: <b>19.16</b>	BC Panel Length: <b>10 @ 12-0</b>	Shape: <b>Parallel Chords</b>
Variable	Left End	Right End			
BC Panel	3-4	3-4			
TC Panel	2-1	2-1			
First Half	0-8	0-8			
First Diag.	4-0	4-0			
Depth	20.00	20.00			

## Loads

Uniform Load in TC (plf)	303.80	Live Load (plf)	201.60
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## Stress Analysis Summary

Int. Panel TC: <b>24.00</b>	Max Panel BC: <b>48.00</b>	Reaction LE: <b>4,579.00</b>	Reaction RE: <b>4,579.00</b>	Minimum Shear: <b>1,144.75</b>	Max TC Comp.: <b>22,337.54</b>	Max BC Tension <b>22,699.73</b>		
Member	TC Tension	TC Compression	BC Tension	BC Compression	Web Tension	Web Comp.	Web Length	PP Dist.
W2	0.00	8,530.32	0.00	0.00	9,553.65	0.00	42.56	0-2
V1S	0.00	8,096.45	0.00	0.00	0.00	815.60	24.34	2-1
W3	0.00	8,096.45	9,660.91	0.00	0.00	4,060.99	20.77	3-4
W4	0.00	13,644.99	9,660.91	0.00	5,098.33	0.00	30.71	4-0
W5	0.00	13,644.99	16,904.70	0.00	0.00	4,171.36	30.71	6-0
W6	0.00	19,440.03	16,904.70	0.00	3,244.39	0.00	30.71	8-0
W7	0.00	19,440.03	21,250.97	0.00	0.00	2,317.42	30.71	10-0
W8	0.00	22,337.54	21,250.97	0.00	1,834.63	0.00	30.71	12-0
W9	0.00	22,337.54	22,699.73	0.00	0.00	1,834.63	30.71	14-0

\* Symmetrical Joist

## Standard Verticals

Member	Position	Max Tension	Max Comp.	Length
V2	Interior	0.00	690.09	19.16

# STRESS ANALYSIS - PAGE 2



Job Number: <b>00-0002</b>	Job Name: <b>LRFD - SJI SUBMITTAL</b>	Date Run: <b>10/8/2006</b>
Location: <b>JUAREZ,</b>	Joist Description: <b>Deep Long Span 20K3</b>	Mark: <b>J07</b>

## Chord Properties

Chord	Area	Rx	Rz	Ryy	Y	Ix	Q	Material
TC	0.3594	0.4652	0.2962	1.0320	0.4212	0.0778	0.9607	1E = 1 1/2 x 1 1/2 x .125
BC	0.3151	0.4675	0.2972	1.0278	0.4154	0.0689	0.9050	1C = 1 1/2 x 1 1/2 x .109

## Axial and Bending Analysis

K: <b>1.00</b>	Fy: <b>50,000.00</b>	Fb: <b>45,000.00</b>	Mom of Inertia: <b>123.46</b>	LL 240: <b>217.88</b>	LL 240: <b>217.88</b>	Max Bridg TC: <b>12-5 5/8</b>	Max Bridg BC: <b>20-6 5/8</b>
Top Chord Check	End Panel LE	First Panel LE	Interior Panel	First Panel RE	End Panel RE	Gap Between Chords: <b>1.00</b>	
Length	23.00	23.00	24.00	23.00	23.00	Min Weld Len 2X: <b>0.5000</b>	
Bending Load	199.00	-	0.00	-	199.00	Max Load Fillers TC: <b>25,773.71</b>	
Axial Load	8,530.32	-	22,337.54	-	8,530.32	Max Load no Fillers TC: <b>19,592.05</b>	
fa	11,868.27	-	31,078.32	-	11,868.27	TC OAL/Ryy: <b>368.2228</b>	
Maximum K L/r	77.65	-	51.59	-	77.65	BC Stress: <b>36,017.72</b>	
Fa	28,303.88	-	35,859.07	-	28,303.88	BC L/Rz: <b>161.5344</b>	
F'e	61,084.59	-	56,100.26	-	61,084.59	TC Shear Stress: <b>12,915.56</b>	
Cm	0.9417	-	0.7784	-	0.9417	BC Shear Stress: <b>14,794.15</b>	
Panel Point Moment	918.51	-	0.00	-	918.51		
Mid Panel Moment	685.40	-	0.00	-	685.40		
Panel Point fb	6371.10	-	0.00	-	6371.10		
Mid Panel fb	1856.16	-	0.00	-	1856.16		
Fillers	0	-	4	-	0		
Panel Point Stress	18,239.37	-	31,078.32	-	18,239.37		
Mid Panel Stress	0.4695	-	0.8667	-	0.4695		

## Web Design

Member	Web Tension	Allow Tension	Web Comp	Allow Comp	Weld	Qty	Material
W2	9,553.65	24,353.48	0.00	4,560.54	2.0 x 0.214	1	RH = round 7/8
W3	0.00	10,546.88	4,060.99	4,143.71	2.0 x 0.125	1	11 = 1 x 1 x .125
W4	5,098.33	9,275.36	0.00	2,414.23	2.1 x 0.109	1	10 = 1 x 1 x .109
W5	0.00	11,727.85	4,171.36	4,789.65	2.0 x 0.109	1	15 = 1 1/4 x 1 1/4 x .109
W6	3,244.39	9,275.36	0.00	2,414.23	2.0 x 0.109	1	10 = 1 x 1 x .109
W7	0.00	9,275.36	2,317.42	2,414.23	2.0 x 0.109	1	10 = 1 x 1 x .109
W8	1,834.63	9,275.36	0.00	2,414.23	2.0 x 0.109	1	10 = 1 x 1 x .109
W9	0.00	9,275.36	1,834.63	2,414.23	2.0 x 0.109	1	10 = 1 x 1 x .109
V1	0.00	9,275.36	815.60	3,826.27	2.0 x 0.109	1	10 = 1 x 1 x .109
V2	0.00	9,275.36	690.09	5,356.41	2.0 x 0.109	1	10 = 1 x 1 x .109

\* Symmetrical Joist



# STRESS ANALYSIS - PAGE 1



Job Number: <b>00-0002</b>	Job Name: <b>LRFD - SJI SUBMITTAL</b>	Date Run: <b>10/8/2006</b>
Location: <b>JUAREZ,</b>	Joist Description: <b>Deep Long Span 24K8</b>	Mark: <b>J08</b>

## Geometry

Base Length: <b>38-0</b>	Working Length: <b>37-8</b>	Joist Depth: <b>24.00</b>	Effective Depth: <b>22.89</b>	BC Panel Length: <b>10 @ 12-0</b>	Shape: <b>Parallel Chords</b>
Variable	Left End	Right End			
BC Panel	4-0	4-0			
TC Panel	2-7	2-7			
First Half	1-0	1-0			
First Diag.	5-0	5-0			
Depth	24.00	24.00			

## Loads

Uniform Load in TC (plf)	471.80	Live Load (plf)	302.40
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## Stress Analysis Summary

Int. Panel TC: 24.00		Max Panel BC: 48.00	Reaction LE: 8,429.80	Reaction RE: 8,429.80	Minimum Shear: 2,107.45	Max TC Comp.: 41,608.88	Max BC Tension 41,139.64	
Member	TC Tension	TC Compression	BC Tension	BC Compression	Web Tension	Web Comp.	Web Length	PP Dist.
W2	0.00	15,851.39	0.00	0.00	17,705.99	0.00	51.38	0-2
V1S	0.00	15,048.15	0.00	0.00	0.00	1,555.36	28.52	2-7
W3	0.00	15,048.15	18,616.30	0.00	0.00	7,685.72	25.85	4-0
W4	0.00	24,716.37	18,616.30	0.00	8,430.26	0.00	33.17	5-0
W5	0.00	24,716.37	29,877.97	0.00	0.00	7,133.30	33.17	7-0
W6	0.00	34,101.10	29,877.97	0.00	5,836.33	0.00	33.17	9-0
W7	0.00	34,101.10	37,385.75	0.00	0.00	4,539.37	33.17	11-0
W8	0.00	39,731.93	37,385.75	0.00	3,242.41	0.00	33.17	13-0
W9	0.00	39,731.93	41,139.64	0.00	0.00	3,053.27	33.17	15-0
W10	0.00	41,608.88	41,139.64	0.00	3,053.27	0.00	33.17	17-0

\* Symmetrical Joist

## Standard Verticals

Member	Position	Max Tension	Max Comp.	Length
V2	Interior	0.00	1,103.24	22.89

# STRESS ANALYSIS - PAGE 2



Job Number: <b>00-0002</b>	Job Name: <b>LRFD - SJI SUBMITTAL</b>	Date Run: <b>10/8/2006</b>
Location: <b>JUAREZ,</b>	Joist Description: <b>Deep Long Span 24K8</b>	Mark: <b>J08</b>

## Chord Properties

Chord	Area	Rx	Rz	Ryy	Y	Ix	Q	Material
TC	0.6254	0.6208	0.3951	1.2286	0.5603	0.2410	0.9522	23 = 2 x 2 x .163
BC	0.4844	0.6262	0.3975	1.2195	0.5464	0.1900	0.8343	20 = 2 x 2 x .125

## Axial and Bending Analysis

K: <b>1.00</b>	Fy: <b>50,000.00</b>	Fb: <b>45,000.00</b>	Mom of Inertia: <b>286.56</b>	LL 240: <b>300.49</b>	LL 240: <b>300.49</b>	Max Bridg TC: <b>14-10 1/8</b>	Max Bridg BC: <b>24-4 5/8</b>
Top Chord Check	End Panel LE	First Panel LE	Interior Panel	First Panel RE	End Panel RE	Gap Between Chords: <b>1.00</b>	
Length	29.00	29.00	24.00	29.00	29.00	Min Weld Len 2X: <b>0.5000</b>	
Bending Load	310.00	310.00	0.00	310.00	310.00	Max Load Fillers TC: <b>48,299.51</b>	
Axial Load	15,851.39	15,048.15	41,608.88	15,048.15	15,851.39	Max Load no Fillers TC: <b>41,456.19</b>	
fa	12,672.37	12,030.22	33,264.16	12,030.22	12,672.37	TC OAL/Ryy: <b>367.8949</b>	
Maximum K L/r	73.39	73.39	38.66	73.39	73.39	BC Stress: <b>42,466.72</b>	
Fa	29,448.25	29,448.25	38,612.98	29,448.25	29,448.25	BC L/Rz: <b>120.7419</b>	
F'e	68,421.98	68,421.98	99,900.85	68,421.98	68,421.98	TC Shear Stress: <b>13,658.25</b>	
Cm	0.9444	0.9473	0.8668	0.9473	0.9444	BC Shear Stress: <b>17,772.92</b>	
Panel Point Moment	2362.67	2362.86	0.00	2362.86	2362.67		
Mid Panel Moment	1662.86	849.39	0.00	849.39	1662.86		
Panel Point fb	7057.29	7057.84	0.00	7057.84	7057.29		
Mid Panel fb	1932.84	987.29	0.00	987.29	1932.84		
Fillers	0	0	2	0	0		
Panel Point Stress	19,729.66	19,088.07	33,264.16	19,088.07	19,729.66		
Mid Panel Stress	0.4826	0.4350	0.8615	0.4350	0.4826		

## Web Design

Member	Web Tension	Allow Tension	Web Comp	Allow Comp	Weld	Qty	Material
W2	17,705.99	24,353.48	0.00	3,226.12	3.7 x 0.215	1	RH = round 7/8
W3	0.00	16,171.88	7,685.72	8,630.11	2.8 x 0.125	1	1E = 1 1/2 x 1 1/2 x .125
W4	8,430.26	9,275.36	0.00	2,134.40	3.5 x 0.109	1	10 = 1 x 1 x .109
W5	0.00	16,171.88	7,133.30	7,931.99	2.6 x 0.125	1	1E = 1 1/2 x 1 1/2 x .125
W6	5,836.33	9,275.36	0.00	2,134.40	2.4 x 0.109	1	10 = 1 x 1 x .109
W7	0.00	13,359.38	4,539.37	4,823.38	2.0 x 0.125	1	18 = 1 1/4 x 1 1/4 x .125
W8	3,242.41	9,275.36	0.00	2,134.40	2.0 x 0.109	1	10 = 1 x 1 x .109
W9	0.00	11,727.85	3,053.27	4,262.72	2.0 x 0.109	1	15 = 1 1/4 x 1 1/4 x .109
W10	3,053.27	9,275.36	0.00	2,134.40	2.0 x 0.109	1	10 = 1 x 1 x .109
V1	0.00	9,275.36	1,555.36	2,887.77	2.0 x 0.109	1	10 = 1 x 1 x .109
V2	0.00	9,275.36	1,103.24	4,337.98	2.0 x 0.109	1	10 = 1 x 1 x .109

\* Symmetrical Joist

# STRESS ANALYSIS - PAGE 1



Job Number: <b>00-0002</b>	Job Name: <b>LRFD - SJI SUBMITTAL</b>	Date Run: <b>10/8/2006</b>
Location: <b>JUAREZ,</b>	Joist Description: <b>Deep Long Span 24K8</b>	Mark: <b>J09</b>

## Geometry

Base Length: <b>38-6</b>	Working Length: <b>38-2</b>	Joist Depth: <b>24.00</b>	Effective Depth: <b>22.89</b>	BC Panel Length: <b>10 @ 12-0</b>	Shape: <b>Parallel Chords</b>
Variable	Left End	Right End			
BC Panel	4-0	4-0			
TC Panel	2-8 1/2	2-8 1/2			
First Half	1-3	1-3			
First Diag.	5-3	5-3			
Depth	24.00	24.00			

## Loads

Uniform Load in TC (plf)	459.10	Live Load (plf)	290.40
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## Stress Analysis Summary

2025 Analysis Summary													
Int. Panel TC: <b>24.00</b>		Max Panel BC: <b>48.00</b>		Reaction LE: <b>8,301.25</b>		Reaction RE: <b>8,301.25</b>		Minimum Shear: <b>2,075.31</b>		Max TC Comp.: <b>41,518.27</b>		Max BC Tension <b>41,062.24</b>	
Member	TC Tension	TC Compresion	BC Tension	BC Compression	Web Tension	Web Comp.	Web Length	PP Dist.					
W2	0.00	15,569.05	0.00	0.00	17,390.62	0.00	51.38	0-2					
V1S	0.00	14,820.49	0.00	0.00	0.00	1,542.79	27.65	2-8 1/2					
W3	0.00	14,820.49	19,172.94	0.00	0.00	7,941.71	27.37	4-0					
W4	0.00	25,101.29	19,172.94	0.00	8,192.95	0.00	33.17	5-3					
W5	0.00	25,101.29	30,117.59	0.00	0.00	6,932.49	33.17	7-3					
W6	0.00	34,221.84	30,117.59	0.00	5,672.04	0.00	33.17	9-3					
W7	0.00	34,221.84	37,414.02	0.00	0.00	4,411.59	33.17	11-3					
W8	0.00	39,694.16	37,414.02	0.00	3,151.13	0.00	33.17	13-3					
W9	0.00	39,694.16	41,062.24	0.00	0.00	3,006.71	33.17	15-3					
W10	0.00	41,518.27	41,062.24	0.00	3,006.71	0.00	33.17	17-3					

\* Symmetrical Joist

## Standard Verticals

Member	Position	Max Tension	Max Comp.	Length
V2	Interior	0.00	1,077.59	22.89

# STRESS ANALYSIS - PAGE 2



Job Number: <b>00-0002</b>	Job Name: <b>LRFD - SJI SUBMITTAL</b>	Date Run: <b>10/8/2006</b>
Location: <b>JUAREZ,</b>	Joist Description: <b>Deep Long Span 24K8</b>	Mark: <b>J09</b>

## Chord Properties

Chord	Area	Rx	Rz	Ryy	Y	Ix	Q	Material
TC	0.6254	0.6208	0.3951	1.2286	0.5603	0.2410	0.9522	23 = 2 x 2 x .163
BC	0.4844	0.6262	0.3975	1.2195	0.5464	0.1900	0.8343	20 = 2 x 2 x .125

## Axial and Bending Analysis

K: <b>1.00</b>	Fy: <b>50,000.00</b>	Fb: <b>45,000.00</b>	Mom of Inertia: <b>286.56</b>	LL 240: <b>288.84</b>	LL 240: <b>288.84</b>	Max Bridg TC: <b>14-10 1/8</b>	Max Bridg BC: <b>24-4 5/8</b>
Top Chord Check	End Panel LE	First Panel LE	Interior Panel	First Panel RE	End Panel RE	Gap Between Chords: <b>1.00</b>	
Length	30.50	30.50	24.00	30.50	30.50	Min Weld Len 2X: <b>0.5000</b>	
Bending Load	302.00	302.00	0.00	302.00	302.00	Max Load Fillers TC: <b>48,299.51</b>	
Axial Load	15,569.05	14,820.49	41,518.27	14,820.49	15,569.05	Max Load no Fillers TC: <b>41,456.19</b>	
fa	12,446.66	11,848.22	33,191.73	11,848.22	12,446.66	TC OAL/Ryy: <b>372.7784</b>	
Maximum K L/r	77.19	77.19	38.66	77.19	77.19	BC Stress: <b>42,386.82</b>	
Fa	28,299.26	28,299.26	38,612.98	28,299.26	28,299.26	BC L/Rz: <b>120.7419</b>	
F'e	61,857.44	61,857.44	99,900.85	61,857.44	61,857.44	TC Shear Stress: <b>13,414.98</b>	
Cm	0.9396	0.9425	0.8671	0.9425	0.9396	BC Shear Stress: <b>17,456.36</b>	
Panel Point Moment	2558.87	2559.15	0.00	2559.15	2558.87		
Mid Panel Moment	1786.82	937.68	0.00	937.68	1786.82		
Panel Point fb	7643.33	7644.15	0.00	7644.15	7643.33		
Mid Panel fb	2076.92	1089.92	0.00	1089.92	2076.92		
Fillers	0	0	2	0	0		
Panel Point Stress	20,090.00	19,492.37	33,191.73	19,492.37	20,090.00		
Mid Panel Stress	0.4968	0.4483	0.8596	0.4483	0.4968		

## Web Design

Member	Web Tension	Allow Tension	Web Comp	Allow Comp	Weld	Qty	Material
W2	17,390.62	24,353.48	0.00	3,226.12	3.6 x 0.215	1	RH = round 7/8
W3	0.00	16,171.88	7,941.71	8,036.37	2.9 x 0.125	1	1E = 1 1/2 x 1 1/2 x .125
W4	8,192.95	9,275.36	0.00	2,134.40	3.4 x 0.109	1	10 = 1 x 1 x .109
W5	0.00	16,171.88	6,932.49	7,931.99	2.5 x 0.125	1	1E = 1 1/2 x 1 1/2 x .125
W6	5,672.04	9,275.36	0.00	2,134.40	2.3 x 0.109	1	10 = 1 x 1 x .109
W7	0.00	13,359.38	4,411.59	4,823.38	2.0 x 0.125	1	18 = 1 1/4 x 1 1/4 x .125
W8	3,151.13	9,275.36	0.00	2,134.40	2.0 x 0.109	1	10 = 1 x 1 x .109
W9	0.00	11,727.85	3,006.71	4,262.72	2.0 x 0.109	1	15 = 1 1/4 x 1 1/4 x .109
W10	3,006.71	9,275.36	0.00	2,134.40	2.0 x 0.109	1	10 = 1 x 1 x .109
V1	0.00	9,275.36	1,542.79	3,071.95	2.0 x 0.109	1	10 = 1 x 1 x .109
V2	0.00	9,275.36	1,077.59	4,337.98	2.0 x 0.109	1	10 = 1 x 1 x .109

\* Symmetrical Joist

# STRESS ANALYSIS - PAGE 1



Job Number: <b>00-0002</b>	Job Name: <b>LRFD - SJI SUBMITTAL</b>	Date Run: <b>10/8/2006</b>
Location: <b>JUAREZ,</b>	Joist Description: <b>Deep Long Span 24K8</b>	Mark: <b>J10</b>

## Geometry

Base Length: <b>39-0</b>	Working Length: <b>38-8</b>	Joist Depth: <b>24.00</b>	Effective Depth: <b>22.89</b>	BC Panel Length: <b>10 @ 12-0</b>	Shape: <b>Parallel Chords</b>
Variable	Left End	Right End			
BC Panel	4-0	4-0			
TC Panel	2-10	2-10			
First Half	1-6	1-6			
First Diag.	5-6	5-6			
Depth	24.00	24.00			

## Loads

Uniform Load in TC (plf)	446.40	Live Load (plf)	278.40
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## Stress Analysis Summary

Int. Panel TC: <b>24.00</b>		Max Panel BC: <b>48.00</b>	Reaction LE: <b>8,166.40</b>	Reaction RE: <b>8,166.40</b>	Minimum Shear: <b>2,041.60</b>	Max TC Comp.: <b>41,378.90</b>	Max BC Tension <b>40,936.08</b>	
Member	TC Tension	TC Compression	BC Tension	BC Compression	Web Tension	Web Comp.	Web Length	PP Dist.
W2	0.00	15,277.23	0.00	0.00	17,064.65	0.00	51.38	0-2
V1S	0.00	14,588.40	0.00	0.00	0.00	1,527.22	26.83	2-10
W3	0.00	14,588.40	19,680.81	0.00	0.00	8,239.03	29.12	4-0
W4	0.00	25,437.44	19,680.81	0.00	7,955.64	0.00	33.17	5-6
W5	0.00	25,437.44	30,308.45	0.00	0.00	6,731.69	33.17	7-6
W6	0.00	34,293.81	30,308.45	0.00	5,507.75	0.00	33.17	9-6
W7	0.00	34,293.81	37,393.54	0.00	0.00	4,283.80	33.17	11-6
W8	0.00	39,607.63	37,393.54	0.00	3,059.86	0.00	33.17	13-6
W9	0.00	39,607.63	40,936.08	0.00	0.00	2,957.86	33.17	15-6
W10	0.00	41,378.90	40,936.08	0.00	2,957.86	0.00	33.17	17-6

\* Symmetrical Joist

## Standard Verticals

Member	Position	Max Tension	Max Comp.	Length
V2	Interior	0.00	1,051.69	22.89

# STRESS ANALYSIS - PAGE 2



Job Number: <b>00-0002</b>	Job Name: <b>LRFD - SJI SUBMITTAL</b>	Date Run: <b>10/8/2006</b>
Location: <b>JUAREZ,</b>	Joist Description: <b>Deep Long Span 24K8</b>	Mark: <b>J10</b>

## Chord Properties

Chord	Area	Rx	Rz	Ryy	Y	Ix	Q	Material
TC	0.6254	0.6208	0.3951	1.2286	0.5603	0.2410	0.9522	23 = 2 x 2 x .163
BC	0.4844	0.6262	0.3975	1.2195	0.5464	0.1900	0.8343	20 = 2 x 2 x .125

## Axial and Bending Analysis

K: <b>1.00</b>	Fy: <b>50,000.00</b>	Fb: <b>45,000.00</b>	Mom of Inertia: <b>286.56</b>	LL 240: <b>277.78</b>	LL 240: <b>277.78</b>	Max Bridg TC: <b>14-10 1/8</b>	Max Bridg BC: <b>24-4 5/8</b>
Top Chord Check	End Panel LE	First Panel LE	Interior Panel	First Panel RE	End Panel RE	Gap Between Chords: <b>1.00</b>	
Length	32.00	32.00	24.00	32.00	32.00	Min Weld Len 2X: <b>0.5000</b>	
Bending Load	294.00	294.00	0.00	294.00	294.00	Max Load Fillers TC: <b>48,299.51</b>	
Axial Load	15,277.23	14,588.40	41,378.90	14,588.40	15,277.23	Max Load no Fillers TC: <b>41,456.19</b>	
fa	12,213.36	11,662.68	33,080.30	11,662.68	12,213.36	TC OAL/Ryy: <b>377.6620</b>	
Maximum K L/r	80.99	80.99	38.66	80.99	80.99	BC Stress: <b>42,256.60</b>	
Fa	27,140.58	27,140.58	38,612.98	27,140.58	27,140.58	BC L/Rz: <b>120.7419</b>	
F'e	56,194.22	56,194.22	99,900.85	56,194.22	56,194.22	TC Shear Stress: <b>13,163.53</b>	
Cm	0.9348	0.9377	0.8675	0.9377	0.9348	BC Shear Stress: <b>17,129.16</b>	
Panel Point Moment	2753.22	2753.58	0.00	2753.58	2753.22		
Mid Panel Moment	1910.46	1024.23	0.00	1024.23	1910.46		
Panel Point fb	8223.86	8224.94	0.00	8224.94	8223.86		
Mid Panel fb	2220.64	1190.52	0.00	1190.52	2220.64		
Fillers	0	0	0	0	0		
Panel Point Stress	20,437.22	19,887.62	33,080.30	19,887.62	20,437.22		
Mid Panel Stress	0.5119	0.4626	0.8567	0.4626	0.5119		

## Web Design

Member	Web Tension	Allow Tension	Web Comp	Allow Comp	Weld	Qty	Material
W2	17,064.65	24,353.48	0.00	3,226.12	3.6 x 0.215	1	RH = round 7/8
W3	0.00	19,964.88	8,239.03	9,103.86	2.4 x 0.156	1	1J = 1 1/2 x 1 1/2 x .156
W4	7,955.64	9,275.36	0.00	2,134.40	3.3 x 0.109	1	10 = 1 x 1 x .109
W5	0.00	14,180.35	6,731.69	6,840.40	2.8 x 0.109	1	1C = 1 1/2 x 1 1/2 x .109
W6	5,507.75	9,275.36	0.00	2,134.40	2.3 x 0.109	1	10 = 1 x 1 x .109
W7	0.00	13,359.38	4,283.80	4,823.38	2.0 x 0.125	1	18 = 1 1/4 x 1 1/4 x .125
W8	3,059.86	9,275.36	0.00	2,134.40	2.0 x 0.109	1	10 = 1 x 1 x .109
W9	0.00	11,727.85	2,957.86	4,262.72	2.0 x 0.109	1	15 = 1 1/4 x 1 1/4 x .109
W10	2,957.86	9,275.36	0.00	2,134.40	2.0 x 0.109	1	10 = 1 x 1 x .109
V1	0.00	9,275.36	1,527.22	3,260.72	2.0 x 0.109	1	10 = 1 x 1 x .109
V2	0.00	9,275.36	1,051.69	4,337.98	2.0 x 0.109	1	10 = 1 x 1 x .109

\* Symmetrical Joist

# STRESS ANALYSIS - PAGE 1



Job Number: <b>00-0002</b>	Job Name: <b>LRFD - SJI SUBMITTAL</b>	Date Run: <b>10/8/2006</b>
Location: <b>JUAREZ,</b>	Joist Description: <b>Deep Long Span 28K9</b>	Mark: <b>J11</b>

## Geometry

Base Length: <b>56-0</b>	Working Length: <b>55-8</b>	Joist Depth: <b>28.00</b>	Effective Depth: <b>26.89</b>	BC Panel Length: <b>10 @ 12-0</b>	Shape: <b>Parallel Chords</b>
Variable	Left End	Right End			
BC Panel	4-8	4-8			
TC Panel	3-1	3-1			
First Half	1-4	1-4			
First Diag.	6-0	6-0			
Depth	28.00	28.00			

## Loads

Uniform Load in TC (plf)	270.80	Live Load (plf)	139.20
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## Stress Analysis Summary

W2 Analysis Summary								
Int. Panel TC: <b>24.00</b>	Max Panel BC: <b>48.00</b>	Reaction LE: <b>7,014.00</b>	Reaction RE: <b>7,014.00</b>	Minimum Shear: <b>1,753.50</b>	Max TC Comp.: <b>43,554.89</b>	Max BC Tension <b>43,330.01</b>		
Member	TC Tension	TC Compression	BC Tension	BC Compression	Web Tension	Web Comp.	Web Length	PP Dist.
W2	0.00	13,345.71	0.00	0.00	14,909.19	0.00	60.33	0-2
V1S	0.00	12,826.43	0.00	0.00	0.00	1,117.70	32.93	3-1
W3	0.00	12,826.43	16,343.43	0.00	0.00	6,878.60	31.29	4-8
W4	0.00	21,066.09	16,343.43	0.00	7,092.86	0.00	36.05	6-0
W5	0.00	21,066.09	25,338.96	0.00	0.00	6,417.35	36.05	8-0
W6	0.00	29,162.06	25,338.96	0.00	5,741.84	0.00	36.05	10-0
W7	0.00	29,162.06	32,535.38	0.00	0.00	5,066.33	36.05	12-0
W8	0.00	35,458.93	32,535.38	0.00	4,390.82	0.00	36.05	14-0
W9	0.00	35,458.93	37,932.69	0.00	0.00	3,715.31	36.05	16-0
W10	0.00	39,956.69	37,932.69	0.00	3,039.80	0.00	36.05	18-0
W11	0.00	39,956.69	41,530.91	0.00	0.00	2,364.29	36.05	20-0
W12	0.00	42,655.34	41,530.91	0.00	2,350.21	0.00	36.05	22-0
W13	0.00	42,655.34	43,330.01	0.00	0.00	2,350.21	36.05	24-0
W14	0.00	43,554.89	43,330.01	0.00	2,350.21	0.00	36.05	26-0

\* Symmetrical Joist

## Standard Verticals

Member	Position	Max Tension	Max Comp.	Length
V2	Interior	0.00	721.78	26.89

# STRESS ANALYSIS - PAGE 2



Job Number: <b>00-0002</b>	Job Name: <b>LRFD - SJI SUBMITTAL</b>	Date Run: <b>10/8/2006</b>
Location: <b>JUAREZ,</b>	Joist Description: <b>Deep Long Span 28K9</b>	Mark: <b>J11</b>

## Chord Properties

Chord	Area	Rx	Rz	Ryy	Y	Ix	Q	Material
TC	0.6254	0.6208	0.3951	1.2286	0.5603	0.2410	0.9522	23 = 2 x 2 x .163
BC	0.4844	0.6262	0.3975	1.2195	0.5464	0.1900	0.8343	20 = 2 x 2 x .125

## Axial and Bending Analysis

K: <b>1.00</b>	Fy: <b>50,000.00</b>	Fb: <b>45,000.00</b>	Mom of Inertia: <b>395.28</b>	LL 240: <b>128.41</b>	LL 240: <b>128.41</b>	Max Bridg TC: <b>14-10 1/8</b>	Max Bridg BC: <b>24-4 5/8</b>
Top Chord Check	End Panel LE	First Panel LE	Interior Panel	First Panel RE	End Panel RE	Gap Between Chords: <b>1.00</b>	
Length	35.00	35.00	24.00	35.00	35.00	Min Weld Len 2X: <b>0.5000</b>	
Bending Load	181.00	181.00	0.00	181.00	181.00	Max Load Fillers TC: <b>48,299.51</b>	
Axial Load	13,345.71	12,826.43	43,554.89	12,826.43	13,345.71	Max Load no Fillers TC: <b>41,456.19</b>	
fa	10,669.21	10,254.08	34,819.90	10,254.08	10,669.21	TC OAL/Ryy: <b>543.7031</b>	
Maximum K L/r	88.58	88.58	38.66	88.58	88.58	BC Stress: <b>44,727.75</b>	
Fa	24,813.79	24,813.79	38,612.98	24,813.79	24,813.79	BC L/Rz: <b>120.7419</b>	
F'e	46,973.79	46,973.79	99,900.85	46,973.79	46,973.79	TC Shear Stress: <b>11,505.48</b>	
Cm	0.9319	0.9345	0.8606	0.9345	0.9319	BC Shear Stress: <b>14,971.63</b>	
Panel Point Moment	2039.54	2039.88	0.00	2039.88	2039.54		
Mid Panel Moment	1402.43	775.17	0.00	775.17	1402.43		
Panel Point fb	6092.08	6093.11	0.00	6093.11	6092.08		
Mid Panel fb	1630.12	901.02	0.00	901.02	1630.12		
Fillers	0	0	6	0	0		
Panel Point Stress	16,761.29	16,347.19	34,819.90	16,347.19	16,761.29		
Mid Panel Stress	0.4758	0.4384	0.9018	0.4384	0.4758		

## Web Design

Member	Web Tension	Allow Tension	Web Comp	Allow Comp	Weld	Qty	Material
W2	14,909.19	31,808.63	0.00	3,826.18	2.9 x 0.230	1	RM = round 1
W3	0.00	17,773.02	6,878.60	6,937.53	2.2 x 0.138	1	1G = 1 1/2 x 1 1/2 x .138
W4	7,092.86	9,275.36	0.00	1,731.91	2.9 x 0.109	1	10 = 1 x 1 x .109
W5	0.00	16,171.88	6,417.35	6,784.68	2.3 x 0.125	1	1E = 1 1/2 x 1 1/2 x .125
W6	5,741.84	9,275.36	0.00	1,731.91	2.4 x 0.109	1	10 = 1 x 1 x .109
W7	0.00	14,180.35	5,066.33	5,909.83	2.1 x 0.109	1	1C = 1 1/2 x 1 1/2 x .109
W8	4,390.82	9,275.36	0.00	1,731.91	2.0 x 0.109	1	10 = 1 x 1 x .109
W9	0.00	13,359.38	3,715.31	3,913.82	2.0 x 0.125	1	18 = 1 1/4 x 1 1/4 x .125
W10	3,039.80	9,275.36	0.00	1,731.91	2.0 x 0.109	1	10 = 1 x 1 x .109
W11	0.00	11,727.85	2,364.29	3,458.88	2.0 x 0.109	1	15 = 1 1/4 x 1 1/4 x .109
W12	2,350.21	9,275.36	0.00	1,731.91	2.0 x 0.109	1	10 = 1 x 1 x .109
W13	0.00	11,727.85	2,350.21	3,458.88	2.0 x 0.109	1	15 = 1 1/4 x 1 1/4 x .109
W14	2,350.21	9,275.36	0.00	1,731.91	2.0 x 0.109	1	10 = 1 x 1 x .109
V1	0.00	9,275.36	1,117.70	2,075.33	2.0 x 0.109	1	10 = 1 x 1 x .109
V2	0.00	9,275.36	721.78	3,111.20	2.0 x 0.109	1	10 = 1 x 1 x .109

\* Symmetrical Joist



# STRESS ANALYSIS - PAGE 1



Job Number: <b>00-0002</b>	Job Name: <b>LRFD - SJI SUBMITTAL</b>	Date Run: <b>10/8/2006</b>
Location: <b>JUAREZ,</b>	Joist Description: <b>Deep Long Span 30K12</b>	Mark: <b>J12</b>

## Geometry

Base Length: <b>50-0</b>	Working Length: <b>49-8</b>	Joist Depth: <b>30.00</b>	Effective Depth: <b>28.85</b>	BC Panel Length: <b>10 @ 12-0</b>	Shape: <b>Parallel Chords</b>
Variable	Left End	Right End			
BC Panel	5-0	5-0			
TC Panel	3-7	3-7			
First Half	2-0	2-0			
First Diag.	7-0	7-0			
Depth	30.00	30.00			

## Loads

Uniform Load in TC (plf)	529.80	Live Load (plf)	318.40
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## Stress Analysis Summary

Int. Panel TC: 24.00		Max Panel BC: 48.00		Reaction LE: 12,406.73		Reaction RE: 12,406.73		Minimum Shear: 3,101.68		Max TC Comp.: 64,085.69		Max BC Tension 63,670.02	
Member	TC Tension	TC Compression	BC Tension	BC Compression	Web Tension	Web Comp.	Web Length	PP Dist.					
W2	0.00	23,230.02	0.00	0.00	25,944.39	0.00	64.78	0-2					
V1S	0.00	22,224.03	0.00	0.00	0.00	2,301.78	33.48	3-7					
W3	0.00	22,224.03	30,416.24	0.00	0.00	12,808.65	37.52	5-0					
W4	0.00	37,482.67	30,416.24	0.00	11,048.48	0.00	37.52	7-0					
W5	0.00	37,482.67	43,717.75	0.00	0.00	9,748.66	37.52	9-0					
W6	0.00	49,121.48	43,717.75	0.00	8,448.84	0.00	37.52	11-0					
W7	0.00	49,121.48	53,693.88	0.00	0.00	7,149.02	37.52	13-0					
W8	0.00	57,434.93	53,693.88	0.00	5,849.19	0.00	37.52	15-0					
W9	0.00	57,434.93	60,344.64	0.00	0.00	4,549.38	37.52	17-0					
W10	0.00	62,423.00	60,344.64	0.00	4,034.86	0.00	37.52	19-0					
W11	0.00	62,423.00	63,670.02	0.00	0.00	4,034.86	37.52	21-0					
W12	0.00	64,085.69	63,670.02	0.00	4,034.86	0.00	37.52	23-0					

\* Symmetrical Joist

## Standard Verticals

Member	Position	Max Tension	Max Comp.	Length
V2	Interior	0.00	1,319.63	28.85

# STRESS ANALYSIS - PAGE 2



Job Number: <b>00-0002</b>	Job Name: <b>LRFD - SJI SUBMITTAL</b>	Date Run: <b>10/8/2006</b>
Location: <b>JUAREZ,</b>	Joist Description: <b>Deep Long Span 30K12</b>	Mark: <b>J12</b>

## Chord Properties

Chord	Area	Rx	Rz	Ryy	Y	Ix	Q	Material
TC	0.8742	0.6113	0.3918	1.2455	0.5852	0.3266	1.0000	28 = 2 x 2 x .232
BC	0.7130	0.6174	0.3938	1.2345	0.5690	0.2718	1.0000	25 = 2 x 2 x .187

## Axial and Bending Analysis

K: <b>1.00</b>	Fy: <b>50,000.00</b>	Fb: <b>45,000.00</b>	Mom of Inertia: <b>654.13</b>	LL 240: <b>299.20</b>	LL 240: <b>299.20</b>	Max Bridg TC: <b>15-0 5/8</b>	Max Bridg BC: <b>24-8 1/4</b>
Top Chord Check	End Panel LE	First Panel LE	Interior Panel	First Panel RE	End Panel RE	Gap Between Chords: <b>1.00</b>	
Length	41.00	41.00	24.00	41.00	41.00	Min Weld Len 2X: <b>0.5000</b>	
Bending Load	350.00	350.00	0.00	350.00	350.00	Max Load Fillers TC: <b>70,289.62</b>	
Axial Load	23,230.02	22,224.03	64,085.69	22,224.03	23,230.02	Max Load no Fillers TC: <b>59,797.13</b>	
fa	13,286.81	12,711.42	36,654.91	12,711.42	13,286.81	TC OAL/Ryy: <b>478.5109</b>	
Maximum K L/r	104.65	104.65	39.26	104.65	104.65	BC Stress: <b>44,647.44</b>	
Fa	20,204.70	20,204.70	40,203.36	20,204.70	20,204.70	BC L/Rz: <b>121.8857</b>	
F'e	33,193.72	33,193.72	96,872.66	33,193.72	33,193.72	TC Shear Stress: <b>14,111.27</b>	
Cm	0.8799	0.8851	0.8486	0.8851	0.8799	BC Shear Stress: <b>17,461.45</b>	
Panel Point Moment	5444.65	5445.81	0.00	5445.81	5444.65		
Mid Panel Moment	3708.63	2115.22	0.00	2115.22	3708.63		
Panel Point fb	11791.22	11793.75	0.00	11793.75	11791.22		
Mid Panel fb	3322.21	1894.82	0.00	1894.82	3322.21		
Fillers	0	0	6	0	0		
Panel Point Stress	25,078.03	24,505.17	36,654.91	24,505.17	25,078.03		
Mid Panel Stress	0.7659	0.6895	0.9117	0.6895	0.7659		

## Web Design

Member	Web Tension	Allow Tension	Web Comp	Allow Comp	Weld	Qty	Material
W2	25,944.39	31,808.63	0.00	3,253.00	5.1 x 0.230	1	RM = round 1
W3	0.00	28,144.39	12,808.65	12,855.52	3.5 x 0.163	1	23 = 2 x 2 x .163
W4	11,048.48	11,727.85	0.00	3,128.62	4.6 x 0.109	1	15 = 1 1/4 x 1 1/4 x .109
W5	0.00	21,796.88	9,748.66	11,693.52	3.5 x 0.125	1	20 = 2 x 2 x .125
W6	8,448.84	9,275.36	0.00	1,566.54	3.5 x 0.109	1	10 = 1 x 1 x .109
W7	0.00	19,964.88	7,149.02	7,603.89	2.1 x 0.156	1	1J = 1 1/2 x 1 1/2 x .156
W8	5,849.19	9,275.36	0.00	1,566.54	2.4 x 0.109	1	10 = 1 x 1 x .109
W9	0.00	14,180.35	4,549.38	5,445.33	2.0 x 0.109	1	1C = 1 1/2 x 1 1/2 x .109
W10	4,034.86	9,275.36	0.00	1,566.54	2.0 x 0.109	1	10 = 1 x 1 x .109
W11	0.00	14,180.35	4,034.86	5,445.33	2.0 x 0.109	1	1C = 1 1/2 x 1 1/2 x .109
W12	4,034.86	9,275.36	0.00	1,566.54	2.0 x 0.109	1	10 = 1 x 1 x .109
V1	0.00	11,727.85	2,301.78	3,929.55	2.0 x 0.109	1	15 = 1 1/4 x 1 1/4 x .109
V2	0.00	9,275.36	1,319.63	2,650.97	2.0 x 0.109	1	10 = 1 x 1 x .109

\* Symmetrical Joist

# STRESS ANALYSIS - PAGE 1



Job Number: <b>00-0002</b>	Job Name: <b>LRFD - SJI SUBMITTAL</b>	Date Run: <b>10/8/2006</b>
Location: <b>JUAREZ,</b>	Joist Description: <b>Deep Long Span 16KCS2</b>	Mark: <b>J13</b>

## Geometry

Base Length: <b>30-0</b>	Working Length: <b>29-8</b>	Joist Depth: <b>16.00</b>	Effective Depth: <b>15.13</b>	BC Panel Length: <b>10 @ 12-0</b>	Shape: <b>Parallel Chords</b>
Variable	Left End	Right End			
BC Panel	2-4	2-4			
TC Panel	1-6 1/2	1-6 1/2			
First Half	0-9 1/2	0-9 1/2			
First Diag.	3-1 1/2	3-1 1/2			
Depth	16.00	16.00			

## Loads

Moment Capacity (inch-kips)	523.50	Gross Moment of Inertia (in^4)	99.00
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## Stress Analysis Summary

Int. Panel TC: <b>19.00</b>		Max Panel BC: <b>19.00</b>		Reaction LE: <b>6,000.00</b>		Reaction RE: <b>6,000.00</b>		Minimum Shear: <b>6,000.00</b>		Max TC Comp.: <b>34,598.96</b>		Max BC Tension: <b>34,598.97</b>	
Member	TC Tension	TC Compression	BC Tension	BC Compression	Web Tension	Web Comp.	Web Length	PP Dist.					
W2	0.00	10,310.29	0.00	0.00	11,929.05	0.00	30.08	0-2					
V1S	0.00	34,598.96	0.00	0.00	7,084.63	7,084.63	17.87	1-6 1/2					
W3	0.00	34,598.96	34,598.96	0.00	7,084.63	7,084.63	17.87	2-4					
W4	0.00	34,598.96	34,598.96	0.00	7,084.63	7,084.63	17.87	3-1 1/2					
W5	0.00	34,598.96	34,598.96	0.00	7,084.63	7,084.63	17.87	3-11					
W6	0.00	34,598.96	34,598.96	0.00	7,084.63	7,084.63	17.87	4-8 1/2					
W7	0.00	34,598.96	34,598.97	0.00	7,084.63	7,084.63	17.87	5-6					
W8	0.00	34,598.96	34,598.97	0.00	7,084.63	7,084.63	17.87	6-3 1/2					
W9	0.00	34,598.96	34,598.97	0.00	7,084.63	7,084.63	17.87	7-1					
W10	0.00	34,598.96	34,598.97	0.00	7,084.63	7,084.63	17.87	7-10 1/2					
W11	0.00	34,598.96	34,598.96	0.00	7,084.63	7,084.63	17.87	8-8					
W12	0.00	34,598.96	34,598.96	0.00	7,084.63	7,084.63	17.87	9-5 1/2					
W13	0.00	34,598.96	34,598.96	0.00	7,084.63	7,084.63	17.87	10-3					
W14	0.00	34,598.96	34,598.96	0.00	7,084.63	7,084.63	17.87	11-0 1/2					
W15	0.00	34,598.96	34,598.96	0.00	7,084.63	7,084.63	17.87	11-10					
W16	0.00	34,598.96	34,598.96	0.00	7,084.63	7,084.63	17.87	12-7 1/2					
W17	0.00	34,598.96	34,598.96	0.00	7,084.63	7,084.63	17.87	13-5					
W18	0.00	34,598.96	34,598.96	0.00	7,084.63	7,084.63	17.87	14-2 1/2					

\* Symmetrical Joist

# STRESS ANALYSIS - PAGE 2



Job Number: <b>00-0002</b>	Job Name: <b>LRFD - SJI SUBMITTAL</b>	Date Run: <b>10/8/2006</b>
Location: <b>JUAREZ,</b>	Joist Description: <b>Deep Long Span 16KCS2</b>	Mark: <b>J13</b>

## Chord Properties

Chord	Area	Rx	Rz	Ryy	Y	Ix	Q	Material
TC	0.5260	0.4567	0.2934	0.8305	0.4436	0.1097	1.0000	1K = 1 1/2 x 1 1/2 x .187
BC	0.3950	0.4634	0.2955	0.8195	0.4259	0.0848	0.9964	1G = 1 1/2 x 1 1/2 x .138

## Axial and Bending Analysis

K: <b>1.00</b>	Fy: <b>50,000.00</b>	Fb: <b>45,000.00</b>	Mom of Inertia: <b>103.48</b>	LL 240: <b>222.10</b>	LL 240: <b>222.10</b>	Max Bridg TC: <b>11-9 1/8</b>	Max Bridg BC: <b>16-4 5/8</b>
Top Chord Check	End Panel LE	First Panel LE	Interior Panel	First Panel RE	End Panel RE	Gap Between Chords: <b>0.50</b>	
Length	16.50	19.00	19.00	19.00	16.50	Min Weld Len 2X: <b>0.5000</b>	
Bending Load	550.00	-	0.00	-	550.00	Max Load Fillers TC: <b>41,264.91</b>	
Axial Load	10,310.29	-	34,598.96	-	10,310.29	Max Load no Fillers TC: <b>34,838.47</b>	
fa	9,800.08	-	32,886.81	-	9,800.08	TC OAL/Ryy: <b>428.6808</b>	
Maximum K L/r	56.24	-	43.35	-	56.24	BC Stress: <b>43,801.04</b>	
Fa	35,707.79	-	39,222.89	-	35,707.79	BC L/Rz: <b>64.3031</b>	
F'e	114,426.70	-	86,295.48	-	114,426.70	TC Shear Stress: <b>11,764.24</b>	
Cm	0.9743	-	0.8476	-	0.9743	BC Shear Stress: <b>15,894.39</b>	
Panel Point Moment	1469.87	-	0.00	-	1469.87		
Mid Panel Moment	911.40	-	0.00	-	911.40		
Panel Point fb	7075.11	-	0.00	-	7075.11		
Mid Panel fb	1841.99	-	0.00	-	1841.99		
Fillers	0	-	0	-	0		
Panel Point Stress	16,875.20	-	32,886.81	-	16,875.20		
Mid Panel Stress	0.3181	-	0.8385	-	0.3181		

## Web Design

Member	Web Tension	Allow Tension	Web Comp	Allow Comp	Weld	Qty	Material
W2	11,929.05	12,425.24	0.00	2,532.99	2.9 x 0.185	1	R9 = round 5/8
V1S	7,084.63	16,705.05	7,084.63	9,323.31	2.0 x 0.159	1	RB = round 11/16
W3	7,084.63	16,705.05	7,084.63	9,323.31	2.0 x 0.159	1	RB = round 11/16
W4	7,084.63	16,705.05	7,084.63	9,323.31	2.0 x 0.159	1	RB = round 11/16
W5	7,084.63	16,705.05	7,084.63	9,323.31	2.0 x 0.159	1	RB = round 11/16
W6	7,084.63	16,705.05	7,084.63	9,323.31	2.0 x 0.159	1	RB = round 11/16
W7	7,084.63	16,705.05	7,084.63	9,323.31	2.0 x 0.159	1	RB = round 11/16
W8	7,084.63	16,705.05	7,084.63	9,323.31	2.0 x 0.159	1	RB = round 11/16
W9	7,084.63	16,705.05	7,084.63	9,323.31	2.0 x 0.159	1	RB = round 11/16
W10	7,084.63	16,705.05	7,084.63	9,323.31	2.0 x 0.159	1	RB = round 11/16
W11	7,084.63	16,705.05	7,084.63	9,323.31	2.0 x 0.159	1	RB = round 11/16
W12	7,084.63	16,705.05	7,084.63	9,323.31	2.0 x 0.159	1	RB = round 11/16
W13	7,084.63	16,705.05	7,084.63	9,323.31	2.0 x 0.159	1	RB = round 11/16
W14	7,084.63	16,705.05	7,084.63	9,323.31	2.0 x 0.159	1	RB = round 11/16
W15	7,084.63	16,705.05	7,084.63	9,323.31	2.0 x 0.159	1	RB = round 11/16
W16	7,084.63	16,705.05	7,084.63	9,323.31	2.0 x 0.159	1	RB = round 11/16
W17	7,084.63	16,705.05	7,084.63	9,323.31	2.0 x 0.159	1	RB = round 11/16
W18	7,084.63	16,705.05	7,084.63	9,323.31	2.0 x 0.159	1	RB = round 11/16

\* Symmetrical Joist

# STRESS ANALYSIS - PAGE 1



Job Number: <b>00-0002</b>	Job Name: <b>LRFD - SJI SUBMITTAL</b>	Date Run: <b>10/8/2006</b>
Location: <b>JUAREZ,</b>	Joist Description: <b>Deep Long Span 30KCS5</b>	Mark: <b>J14</b>

## Geometry

Base Length: <b>50-0</b>	Working Length: <b>49-8</b>	Joist Depth: <b>30.00</b>	Effective Depth: <b>28.45</b>	BC Panel Length: <b>10 @ 12-0</b>	Shape: <b>Parallel Chords</b>
Variable	Left End	Right End			
BC Panel	5-0	5-0			
TC Panel	3-7	3-7			
First Half	2-0	2-0			
First Diag.	7-0	7-0			
Depth	30.00	30.00			

## Loads

Moment Capacity (inch-kips)	2,749.50	Gross Moment of Inertia (in^4)	934.00
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## Stress Analysis Summary

Int. Panel TC: <b>24.00</b>		Max Panel BC: <b>48.00</b>		Reaction LE: <b>13,800.00</b>		Reaction RE: <b>13,800.00</b>		Minimum Shear: <b>13,800.00</b>		Max TC Comp.: <b>96,650.91</b>		Max BC Tension <b>96,650.91</b>	
Member	TC Tension	TC Compresion	BC Tension	BC Compresion	Web Tension	Web Comp.	Web Length	PP Dist.					
W2	0.00	28,135.80	0.00	0.00	31,337.89	0.00	64.60	0-2					
V1S	0.00	96,650.90	0.00	0.00	16,076.32	16,076.32	33.14	3-7					
W3	0.00	96,650.90	96,650.91	0.00	18,055.07	18,055.07	37.22	5-0					
W4	0.00	96,650.90	96,650.91	0.00	18,055.07	18,055.07	37.22	7-0					
W5	0.00	96,650.90	96,650.91	0.00	18,055.07	18,055.07	37.22	9-0					
W6	0.00	96,650.91	96,650.91	0.00	18,055.07	18,055.07	37.22	11-0					
W7	0.00	96,650.91	96,650.91	0.00	18,055.07	18,055.07	37.22	13-0					
W8	0.00	96,650.91	96,650.91	0.00	18,055.07	18,055.07	37.22	15-0					
W9	0.00	96,650.91	96,650.90	0.00	18,055.07	18,055.07	37.22	17-0					
W10	0.00	96,650.91	96,650.90	0.00	18,055.07	18,055.07	37.22	19-0					
W11	0.00	96,650.91	96,650.89	0.00	18,055.07	18,055.07	37.22	21-0					
W12	0.00	96,650.90	96,650.89	0.00	18,055.07	18,055.07	37.22	23-0					

\* Symmetrical Joist

## Standard Verticals

Member	Position	Max Tension	Max Comp.	Length
V2	Interior	13,800.00	13,800.00	28.45

# STRESS ANALYSIS - PAGE 2



Job Number: <b>00-0002</b>	Job Name: <b>LRFD - SJI SUBMITTAL</b>	Date Run: <b>10/8/2006</b>
Location: <b>JUAREZ,</b>	Joist Description: <b>Deep Long Span 30KCS5</b>	Mark: <b>J14</b>

## Chord Properties

Chord	Area	Rx	Rz	Ryy	Y	Ix	Q	Material
TC	1.4375	0.9304	0.5924	1.6333	0.8424	1.2442	0.9607	33 = 3 x 3 x .250
BC	1.0971	0.7723	0.4925	1.4353	0.7099	0.6543	0.9964	2E = 2 1/2 x 2 1/2 x .230

## Axial and Bending Analysis

K: <b>1.00</b>	Fy: <b>50,000.00</b>	Fb: <b>45,000.00</b>	Mom of Inertia: <b>1,008.99</b>	LL 240: <b>461.51</b>	LL 240: <b>461.51</b>	Max Bridg TC: <b>23-1 5/8</b>	Max Bridg BC: <b>28-8 1/2</b>
Top Chord Check	End Panel LE	First Panel LE	Interior Panel	First Panel RE	End Panel RE	Gap Between Chords: <b>1.00</b>	
Length	41.00	41.00	24.00	41.00	41.00	Min Weld Len 2X: <b>0.7364</b>	
Bending Load	550.00	0.00	0.00	0.00	550.00	Max Load Fillers TC: <b>118,615.24</b>	
Axial Load	28,135.80	96,650.90	96,650.91	96,650.90	28,135.80	Max Load no Fillers TC: <b>110,755.74</b>	
fa	9,786.36	33,617.70	33,617.71	33,617.70	9,786.36	TC OAL/Ryy: <b>364.9120</b>	
Maximum K L/r	69.21	44.07	25.80	44.07	69.21	BC Stress: <b>44,048.36</b>	
Fa	30,879.02	37,718.70	41,257.48	37,718.70	30,879.02	BC L/Rz: <b>97.4700</b>	
F'e	76,891.73	76,891.73	224,401.03	76,891.73	76,891.73	TC Shear Stress: <b>9,311.12</b>	
Cm	0.9618	0.8688	0.9401	0.8688	0.9618	BC Shear Stress: <b>12,146.25</b>	
Panel Point Moment	8555.87	0.00	0.00	0.00	8555.87		
Mid Panel Moment	5827.85	0.00	0.00	0.00	5827.85		
Panel Point fb	7418.28	0.00	0.00	0.00	7418.28		
Mid Panel fb	1972.82	0.00	0.00	0.00	1972.82		
Fillers	0	1	0	1	0		
Panel Point Stress	17,204.64	33,617.70	33,617.71	33,617.70	17,204.64		
Mid Panel Stress	0.3672	0.8913	0.8148	0.8913	0.3672		

## Web Design

Member	Web Tension	Allow Tension	Web Comp	Allow Comp	Weld	Qty	Material
W2	31,337.89	31,808.63	0.00	3,582.58	6.1 x 0.230	1	RM = round 1
W3	18,055.07	39,337.92	18,055.07	19,441.20	4.3 x 0.188	1	28 = 2 x 2 x .232
W4	18,055.07	30,286.08	18,055.07	18,496.95	4.6 x 0.176	1	24 = 2 x 2 x .176
W5	18,055.07	30,286.08	18,055.07	18,496.95	4.6 x 0.176	1	24 = 2 x 2 x .176
W6	18,055.07	30,286.08	18,055.07	18,496.95	4.6 x 0.176	1	24 = 2 x 2 x .176
W7	18,055.07	30,286.08	18,055.07	18,496.95	4.6 x 0.176	1	24 = 2 x 2 x .176
W8	18,055.07	30,286.08	18,055.07	18,496.95	4.6 x 0.176	1	24 = 2 x 2 x .176
W9	18,055.07	30,286.08	18,055.07	18,496.95	4.6 x 0.176	1	24 = 2 x 2 x .176
W10	18,055.07	30,286.08	18,055.07	18,496.95	4.6 x 0.176	1	24 = 2 x 2 x .176
W11	18,055.07	30,286.08	18,055.07	18,496.95	4.6 x 0.176	1	24 = 2 x 2 x .176
W12	18,055.07	30,286.08	18,055.07	18,496.95	4.6 x 0.176	1	24 = 2 x 2 x .176
V1	16,076.32	28,144.39	16,076.32	18,635.91	4.4 x 0.163	1	23 = 2 x 2 x .163
V2	13,800.00	21,796.88	13,800.00	14,424.00	5.0 x 0.125	1	20 = 2 x 2 x .125

\* Symmetrical Joist

# STRESS ANALYSIS - PAGE 1



Job Number: <b>00-0002</b>	Job Name: <b>LRFD - SJI SUBMITTAL</b>	Date Run: <b>10/8/2006</b>
Location: <b>JUAREZ,</b>	Joist Description: <b>Deep Long Span 18LH02</b>	Mark: <b>T01</b>

## Geometry

Base Length: <b>26-0</b>	Working Length: <b>25-8</b>	Joist Depth: <b>18.00</b>	Effective Depth: <b>17.12</b>	BC Panel Length: <b>10 @ 12-0</b>	Shape: <b>Parallel Chords</b>
Variable	Left End	Right End			
BC Panel	3-9	3-9			
TC Panel	2-3	2-3			
First Half	0-3	0-3			
First Diag.	4-0	4-0			
Depth	18.00	18.00			

## Loads

Uniform Load in TC (plf)	675.60	Live Load (plf)	454.40
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## Stress Analysis Summary

Int. Panel TC: <b>18.00</b>		Max Panel BC: <b>36.00</b>		Reaction LE: <b>8,264.67</b>		Reaction RE: <b>8,264.67</b>		Minimum Shear: <b>2,066.17</b>		Max TC Comp.: <b>36,655.30</b>		Max BC Tension <b>37,163.02</b>	
Member	TC Tension	TC Compression	BC Tension	BC Compression	Web Tension	Web Comp.	Web Length	PP Dist.					
W2	0.00	19,068.84	0.00	0.00	20,525.28	0.00	46.28	0-2					
V1S	0.00	17,771.37	0.00	0.00	0.00	1,974.09	24.84	2-3					
W3	0.00	17,771.37	18,885.51	0.00	0.00	6,456.36	17.38	3-9					
W4	0.00	24,470.30	18,885.51	0.00	7,708.30	0.00	24.84	4-0					
W5	0.00	24,470.30	29,039.68	0.00	0.00	6,306.79	24.84	5-6					
W6	0.00	32,593.64	29,039.68	0.00	4,905.28	0.00	24.84	7-0					
W7	0.00	32,593.64	35,132.18	0.00	0.00	3,503.77	24.84	8-6					
W8	0.00	36,655.30	35,132.18	0.00	2,997.67	0.00	24.84	10-0					
W9	0.00	36,655.30	37,163.02	0.00	0.00	2,997.67	24.84	11-6					

\* Symmetrical Joist

## Standard Verticals

Member	Position	Max Tension	Max Comp.	Length
V2	Interior	0.00	1,149.28	17.12

# STRESS ANALYSIS - PAGE 2



Job Number: <b>00-0002</b>	Job Name: <b>LRFD - SJI SUBMITTAL</b>	Date Run: <b>10/8/2006</b>
Location: <b>JUAREZ,</b>	Joist Description: <b>Deep Long Span 18LH02</b>	Mark: <b>T01</b>

## Chord Properties

Chord	Area	Rx	Rz	Ryy	Y	Ix	Q	Material
TC	0.5260	0.4567	0.2934	1.0483	0.4436	0.1097	1.0000	1K = 1 1/2 x 1 1/2 x .187
BC	0.4437	0.4609	0.2946	1.0401	0.4324	0.0942	1.0000	1J = 1 1/2 x 1 1/2 x .156

## Axial and Bending Analysis

K: <b>0.75</b>	Fy: <b>50,000.00</b>	Fb: <b>45,000.00</b>	Mom of Inertia: <b>141.35</b>	LL 240: <b>468.47</b>	LL 240: <b>468.47</b>	Max Bridg TC: <b>14-10 1/4</b>	Max Bridg BC: <b>20-9 5/8</b>
Top Chord Check	End Panel LE	First Panel LE	Interior Panel	First Panel RE	End Panel RE	Gap Between Chords: <b>1.00</b>	
Length	25.00	21.00	18.00	21.00	25.00	Min Weld Len 2X: <b>0.5000</b>	
Bending Load	442.00	442.00	442.00	442.00	442.00	Max Load Fillers TC: <b>42,282.71</b>	
Axial Load	19,068.84	17,771.37	36,655.30	17,771.37	19,068.84	Max Load no Fillers TC: <b>39,493.32</b>	
fa	18,125.21	16,891.94	34,841.39	16,891.94	18,125.21	TC OAL/Ryy: <b>293.8080</b>	
Maximum K L/r	85.22	71.58	34.34	71.58	85.22	BC Stress: <b>41,881.94</b>	
Fa	26,461.36	30,938.62	41,282.31	30,938.62	26,461.36	BC L/Rz: <b>122.2017</b>	
F'e	49,844.27	70,640.97	170,933.70	70,640.97	49,844.27	TC Shear Stress: <b>16,289.90</b>	
Cm	0.8909	0.9283	0.9185	0.9283	0.8909	BC Shear Stress: <b>19,461.37</b>	
Panel Point Moment	2277.37	2277.31	994.50	2277.31	2277.37		
Mid Panel Moment	1851.57	479.44	497.25	479.44	1851.57		
Panel Point fb	10961.96	10961.67	4786.96	10961.67	10961.96		
Mid Panel fb	3742.11	968.97	1004.97	968.97	3742.11		
Fillers	0	0	0	0	0		
Panel Point Stress	29,087.17	27,853.61	39,628.35	27,853.61	29,087.17		
Mid Panel Stress	0.8014	0.5723	0.8697	0.5723	0.8014		

## Web Design

Member	Web Tension	Allow Tension	Web Comp	Allow Comp	Weld	Qty	Material
W2	20,525.28	27,059.42	0.00	3,034.42	4.3 x 0.215	1	RH = round 7/8
W3	0.00	11,727.85	6,456.36	6,872.40	2.7 x 0.109	1	15 = 1 1/4 x 1 1/4 x .109
W4	7,708.30	9,275.36	0.00	4,795.77	3.2 x 0.109	1	10 = 1 x 1 x .109
W5	0.00	11,727.85	6,306.79	7,621.77	2.6 x 0.109	1	15 = 1 1/4 x 1 1/4 x .109
W6	4,905.28	9,275.36	0.00	4,795.77	2.0 x 0.109	1	10 = 1 x 1 x .109
W7	0.00	9,275.36	3,503.77	4,795.77	2.0 x 0.109	1	10 = 1 x 1 x .109
W8	2,997.67	9,275.36	0.00	4,795.77	2.0 x 0.109	1	10 = 1 x 1 x .109
W9	0.00	9,275.36	2,997.67	4,795.77	2.0 x 0.109	1	10 = 1 x 1 x .109
V1	0.00	9,275.36	1,974.09	4,795.77	2.0 x 0.109	1	10 = 1 x 1 x .109
V2	0.00	9,275.36	1,149.28	6,780.08	2.0 x 0.109	1	10 = 1 x 1 x .109

\* Symmetrical Joist



# STRESS ANALYSIS - PAGE 1



Job Number: <b>00-0002</b>	Job Name: <b>LRFD - SJI SUBMITTAL</b>	Date Run: <b>10/8/2006</b>
Location: <b>JUAREZ,</b>	Joist Description: <b>Deep Long Span 20LH10</b>	Mark: <b>T02</b>

## Geometry

Base Length: <b>40-0</b>	Working Length: <b>39-8</b>	Joist Depth: <b>20.00</b>	Effective Depth: <b>18.57</b>	BC Panel Length: <b>10 @ 12-0</b>	Shape: <b>Parallel Chords</b>
Variable	Left End	Right End			
BC Panel	4-2	4-2			
TC Panel	2-7	2-7			
First Half	0-10	0-10			
First Diag.	5-0	5-0			
Depth	20.00	20.00			

## Loads

Uniform Load in TC (plf)	855.80	Live Load (plf)	406.40
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## Stress Analysis Summary

2025 Analysis Summary								
Int. Panel TC: <b>20.00</b>	Max Panel BC: <b>40.00</b>	Reaction LE: <b>15,700.07</b>	Reaction RE: <b>15,700.07</b>	Minimum Shear: <b>3,925.02</b>	Max TC Comp.: <b>100,631.77</b>	Max BC Tension <b>99,921.15</b>		
Member	TC Tension	TC Compresion	BC Tension	BC Compression	Web Tension	Web Comp.	Web Length	PP Dist.
W2	0.00	38,117.98	0.00	0.00	40,869.95	0.00	51.47	0-2
V1S	0.00	36,160.21	0.00	0.00	0.00	3,240.42	26.56	2-7
W3	0.00	36,160.21	43,071.05	0.00	0.00	14,573.33	21.09	4-2
W4	0.00	55,151.69	43,071.05	0.00	16,483.42	0.00	27.29	5-0
W5	0.00	55,151.69	65,811.09	0.00	0.00	14,544.20	27.29	6-8
W6	0.00	75,049.23	65,811.09	0.00	12,604.97	0.00	27.29	8-4
W7	0.00	75,049.23	82,866.12	0.00	0.00	10,665.75	27.29	10-0
W8	0.00	89,261.75	82,866.12	0.00	8,726.52	0.00	27.29	11-8
W9	0.00	89,261.75	94,236.13	0.00	0.00	6,787.29	27.29	13-4
W10	0.00	97,789.26	94,236.13	0.00	5,769.20	0.00	27.29	15-0
W11	0.00	97,789.26	99,921.15	0.00	0.00	5,769.20	27.29	16-8
W12	0.00	100,631.77	99,921.15	0.00	5,769.20	0.00	27.29	18-4

\* Symmetrical Joist

## Standard Verticals

Member	Position	Max Tension	Max Comp.	Length
V2	Interior	0.00	1,822.49	18.57

# STRESS ANALYSIS - PAGE 2



Job Number: <b>00-0002</b>	Job Name: <b>LRFD - SJI SUBMITTAL</b>	Date Run: <b>10/8/2006</b>
Location: <b>JUAREZ,</b>	Joist Description: <b>Deep Long Span 20LH10</b>	Mark: <b>T02</b>

## Chord Properties

Chord	Area	Rx	Rz	Ryy	Y	Ix	Q	Material
TC	1.1875	0.7695	0.4915	1.4400	0.7171	0.7031	1.0000	2F = 2 1/2 x 2 1/2 x .250
BC	1.1875	0.7695	0.4915	1.4400	0.7171	0.7031	1.0000	2F = 2 1/2 x 2 1/2 x .250

## Axial and Bending Analysis

K: <b>0.75</b>	Fy: <b>50,000.00</b>	Fb: <b>45,000.00</b>	Mom of Inertia: <b>410.72</b>	LL 240: <b>368.78</b>	LL 240: <b>368.78</b>	Max Bridg TC: <b>20-4 3/4</b>	Max Bridg BC: <b>28-9 5/8</b>
Top Chord Check	End Panel LE	First Panel LE	Interior Panel	First Panel RE	End Panel RE	Gap Between Chords: <b>1.00</b>	
Length	29.00	29.00	20.00	29.00	29.00	Min Weld Len 2X: <b>1.0843</b>	
Bending Load	575.00	575.00	575.00	575.00	575.00	Max Load Fillers TC: <b>101,109.28</b>	
Axial Load	38,117.98	36,160.21	100,631.77	36,160.21	38,117.98	Max Load no Fillers TC: <b>98,870.09</b>	
fa	16,049.68	15,225.35	42,371.27	15,225.35	16,049.68	TC OAL/Ryy: <b>330.5663</b>	
Maximum K L/r	59.01	59.01	25.00	59.01	59.01	BC Stress: <b>42,072.06</b>	
Fa	34,885.51	34,885.51	42,989.73	34,885.51	34,885.51	BC L/Rz: <b>81.3905</b>	
F'e	105,139.20	105,139.20	392,986.97	105,139.20	105,139.20	TC Shear Stress: <b>14,265.91</b>	
Cm	0.9542	0.9566	0.9569	0.9566	0.9542	BC Shear Stress: <b>14,265.91</b>	
Panel Point Moment	4446.78	4447.52	1597.22	4447.52	4446.78		
Mid Panel Moment	3059.20	1688.16	798.61	1688.16	3059.20		
Panel Point fb	5637.65	5638.59	2024.97	5638.59	5637.65		
Mid Panel fb	1559.97	860.84	407.24	860.84	1559.97		
Fillers	0	0	2	0	0		
Panel Point Stress	21,687.32	20,863.94	44,396.24	20,863.94	21,687.32		
Mid Panel Stress	0.4991	0.4578	0.9953	0.4578	0.4991		

## Web Design

Member	Web Tension	Allow Tension	Web Comp	Allow Comp	Weld	Qty	Material
W2	40,869.95	44,730.88	0.00	6,706.39	7.5 x 0.245	1	RP = round 1 1/8
W3	0.00	24,819.80	14,573.33	17,053.54	4.6 x 0.143	1	21 = 2 x 2 x .143
W4	16,483.42	17,773.02	0.00	12,485.29	5.4 x 0.138	1	1G = 1 1/2 x 1 1/2 x .138
W5	0.00	21,796.88	14,544.20	15,469.89	5.2 x 0.125	1	20 = 2 x 2 x .125
W6	12,604.97	13,359.38	0.00	8,044.51	4.5 x 0.125	1	18 = 1 1/4 x 1 1/4 x .125
W7	0.00	16,171.88	10,665.75	11,109.26	3.8 x 0.125	1	1E = 1 1/2 x 1 1/2 x .125
W8	8,726.52	9,275.36	0.00	4,185.07	3.6 x 0.109	1	10 = 1 x 1 x .109
W9	0.00	11,727.85	6,787.29	7,005.60	2.8 x 0.109	1	15 = 1 1/4 x 1 1/4 x .109
W10	5,769.20	9,275.36	0.00	4,185.07	2.4 x 0.109	1	10 = 1 x 1 x .109
W11	0.00	11,727.85	5,769.20	7,005.60	2.4 x 0.109	1	15 = 1 1/4 x 1 1/4 x .109
W12	5,769.20	9,275.36	0.00	4,185.07	2.4 x 0.109	1	10 = 1 x 1 x .109
V1	0.00	9,275.36	3,240.42	4,363.19	2.0 x 0.109	1	10 = 1 x 1 x .109
V2	0.00	9,275.36	1,822.49	6,417.30	2.0 x 0.109	1	10 = 1 x 1 x .109

\* Symmetrical Joist

# STRESS ANALYSIS - PAGE 1



Job Number: <b>00-0002</b>	Job Name: <b>LRFD - SJI SUBMITTAL</b>	Date Run: <b>10/8/2006</b>
Location: <b>JUAREZ,</b>	Joist Description: <b>Deep Long Span 24LH11</b>	Mark: <b>T03</b>

## Geometry

Base Length: <b>48-0</b>	Working Length: <b>47-8</b>	Joist Depth: <b>24.00</b>	Effective Depth: <b>22.32</b>	BC Panel Length: <b>10 @ 12-0</b>	Shape: <b>Parallel Chords</b>
Variable	Left End	Right End			
BC Panel	5-0	5-0			
TC Panel	3-1	3-1			
First Half	1-0	1-0			
First Diag.	6-0	6-0			
Depth	24.00	24.00			

## Loads

Uniform Load in TC (plf)	810.20	Live Load (plf)	388.80
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## Stress Analysis Summary

Int. Panel TC: <b>24.00</b>		Max Panel BC: <b>48.00</b>		Reaction LE: <b>17,874.99</b>		Reaction RE: <b>17,875.00</b>		Minimum Shear: <b>4,468.75</b>		Max TC Comp.: <b>114,503.27</b>		Max BC Tension <b>113,696.95</b>	
Member	TC Tension	TC Compression	BC Tension	BC Compression	Web Tension	Web Comp.	Web Length	PP Dist.					
W2	0.00	43,600.16	0.00	0.00	46,718.14	0.00	62.15	0-2					
V1S	0.00	41,346.38	0.00	0.00	0.00	3,713.33	32.05	3-1					
W3	0.00	41,346.38	49,191.22	0.00	0.00	16,568.62	25.34	5-0					
W4	0.00	62,898.69	49,191.22	0.00	18,720.50	0.00	32.78	6-0					
W5	0.00	62,898.69	74,993.52	0.00	0.00	16,518.09	32.78	8-0					
W6	0.00	85,475.69	74,993.52	0.00	14,315.68	0.00	32.78	10-0					
W7	0.00	85,475.69	94,345.23	0.00	0.00	12,113.27	32.78	12-0					
W8	0.00	101,602.13	94,345.23	0.00	9,910.85	0.00	32.78	14-0					
W9	0.00	101,602.13	107,246.38	0.00	0.00	7,708.44	32.78	16-0					
W10	0.00	111,278.01	107,246.38	0.00	6,561.35	0.00	32.78	18-0					
W11	0.00	111,278.01	113,696.95	0.00	0.00	6,561.35	32.78	20-0					
W12	0.00	114,503.27	113,696.95	0.00	6,561.35	0.00	32.78	22-0					

\* Symmetrical Joist

## Standard Verticals

Member	Position	Max Tension	Max Comp.	Length
V2	Interior	0.00	2,072.52	22.32

# STRESS ANALYSIS - PAGE 2



Job Number: <b>00-0002</b>	Job Name: <b>LRFD - SJI SUBMITTAL</b>	Date Run: <b>10/8/2006</b>
Location: <b>JUAREZ,</b>	Joist Description: <b>Deep Long Span 24LH11</b>	Mark: <b>T03</b>

## Chord Properties

Chord	Area	Rx	Rz	Ryy	Y	Ix	Q	Material
TC	1.4375	0.9304	0.5924	1.6333	0.8424	1.2442	0.9607	33 = 3 x 3 x .250
BC	1.3105	0.9336	0.5937	1.6283	0.8340	1.1423	0.9223	31 = 3 x 3 x .227

## Axial and Bending Analysis

K: <b>0.75</b>	Fy: <b>50,000.00</b>	Fb: <b>45,000.00</b>	Mom of Inertia: <b>685.64</b>	LL 240: <b>354.77</b>	LL 240: <b>354.77</b>	Max Bridg TC: <b>23-1 5/8</b>	Max Bridg BC: <b>32-6 3/4</b>
Top Chord Check	End Panel LE	First Panel LE	Interior Panel	First Panel RE	End Panel RE	Gap Between Chords: <b>1.00</b>	
Length	35.00	35.00	24.00	35.00	35.00	Min Weld Len 2X: <b>1.2338</b>	
Bending Load	544.00	544.00	544.00	544.00	544.00	Max Load Fillers TC: <b>119,026.98</b>	
Axial Load	43,600.16	41,346.38	114,503.27	41,346.38	43,600.16	Max Load no Fillers TC: <b>115,427.12</b>	
fa	15,165.27	14,381.35	39,827.22	14,381.35	15,165.27	TC OAL/Ryy: <b>350.2176</b>	
Maximum K L/r	59.08	59.08	22.04	59.08	59.08	BC Stress: <b>43,380.18</b>	
Fa	33,830.35	33,830.35	41,781.37	33,830.35	33,830.35	BC L/Rz: <b>80.8435</b>	
F'e	105,514.28	105,514.28	398,935.16	105,514.28	105,514.28	TC Shear Stress: <b>13,515.05</b>	
Cm	0.9569	0.9591	0.9601	0.9591	0.9569	BC Shear Stress: <b>14,865.77</b>	
Panel Point Moment	6129.88	6130.91	2176.00	6130.91	6129.88		
Mid Panel Moment	4215.04	2329.78	1088.00	2329.78	4215.04		
Panel Point fb	5314.84	5315.74	1886.68	5315.74	5314.84		
Mid Panel fb	1426.86	788.67	368.31	788.67	1426.86		
Fillers	0	0	0	0	0		
Panel Point Stress	20,480.12	19,697.09	41,713.90	19,697.09	20,480.12		
Mid Panel Stress	0.4852	0.4454	0.9623	0.4454	0.4852		

## Web Design

Member	Web Tension	Allow Tension	Web Comp	Allow Comp	Weld	Qty	Material
W2	46,718.14	47,342.79	0.00	20,844.46	11.2 x 0.187	2	1K = 1 1/2 x 1 1/2 x .187
W3	0.00	28,144.39	16,568.62	17,740.92	4.6 x 0.163	1	23 = 2 x 2 x .163
W4	18,720.50	19,964.88	0.00	11,999.17	5.4 x 0.156	1	1J = 1 1/2 x 1 1/2 x .156
W5	0.00	24,819.80	16,518.09	17,312.30	5.2 x 0.143	1	21 = 2 x 2 x .143
W6	14,315.68	16,171.88	0.00	9,576.40	5.1 x 0.125	1	1E = 1 1/2 x 1 1/2 x .125
W7	0.00	21,796.88	12,113.27	14,401.37	4.4 x 0.125	1	20 = 2 x 2 x .125
W8	9,910.85	10,546.88	0.00	3,351.02	3.6 x 0.125	1	11 = 1 x 1 x .125
W9	0.00	14,180.35	7,708.44	8,159.46	3.2 x 0.109	1	1C = 1 1/2 x 1 1/2 x .109
W10	6,561.35	9,275.36	0.00	2,965.41	2.7 x 0.109	1	10 = 1 x 1 x .109
W11	0.00	14,180.35	6,561.35	8,159.46	2.7 x 0.109	1	1C = 1 1/2 x 1 1/2 x .109
W12	6,561.35	9,275.36	0.00	2,965.41	2.7 x 0.109	1	10 = 1 x 1 x .109
V1	0.00	11,727.85	3,713.33	5,811.08	2.0 x 0.109	1	15 = 1 1/4 x 1 1/4 x .109
V2	0.00	9,275.36	2,072.52	5,445.50	2.0 x 0.109	1	10 = 1 x 1 x .109

\* Symmetrical Joist

# STRESS ANALYSIS - PAGE 1



Job Number: <b>00-0002</b>	Job Name: <b>LRFD - SJI SUBMITTAL</b>	Date Run: <b>10/8/2006</b>
Location: <b>JUAREZ,</b>	Joist Description: <b>Deep Long Span 28LH05</b>	Mark: <b>T04</b>

## Geometry

Base Length: <b>41-0</b>	Working Length: <b>40-8</b>	Joist Depth: <b>28.00</b>	Effective Depth: <b>27.00</b>	BC Panel Length: <b>10 @ 12-0</b>	Shape: <b>Parallel Chords</b>
Variable	Left End	Right End			
BC Panel	5-10	5-10			
TC Panel	3-6	3-6			
First Half	0-8	0-8			
First Diag.	6-6	6-6			
Depth	28.00	28.00			

## Loads

Uniform Load in TC (plf)	515.60	Live Load (plf)	350.40
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## Stress Analysis Summary

Int. Panel TC: <b>28.00</b>		Max Panel BC: <b>56.00</b>		Reaction LE: <b>10,004.00</b>		Reaction RE: <b>10,004.00</b>		Minimum Shear: <b>2,501.00</b>		Max TC Comp.: <b>44,614.33</b>		Max BC Tension <b>45,209.68</b>	
Member	TC Tension	TC Compression	BC Tension	BC Compression	Web Tension	Web Comp.	Web Length	PP Dist.					
W2	0.00	23,133.36	0.00	0.00	24,889.72	0.00	73.16	0-2					
V1S	0.00	21,517.42	0.00	0.00	0.00	2,467.76	38.89	3-6					
W3	0.00	21,517.42	23,777.30	0.00	0.00	7,953.80	28.16	5-10					
W4	0.00	30,326.08	23,777.30	0.00	9,096.88	0.00	38.89	6-6					
W5	0.00	30,326.08	35,684.18	0.00	0.00	7,442.90	38.89	8-10					
W6	0.00	39,851.58	35,684.18	0.00	5,788.92	0.00	38.89	11-2					
W7	0.00	39,851.58	42,828.30	0.00	0.00	4,134.94	38.89	13-6					
W8	0.00	44,614.33	42,828.30	0.00	3,603.31	0.00	38.89	15-10					
W9	0.00	44,614.33	45,209.68	0.00	0.00	3,603.31	38.89	18-2					

\* Symmetrical Joist

## Standard Verticals

Member	Position	Max Tension	Max Comp.	Length
V2	Interior	0.00	1,371.07	27.00

# STRESS ANALYSIS - PAGE 2



Job Number: <b>00-0002</b>	Job Name: <b>LRFD - SJI SUBMITTAL</b>	Date Run: <b>10/8/2006</b>
Location: <b>JUAREZ,</b>	Joist Description: <b>Deep Long Span 28LH05</b>	Mark: <b>T04</b>

## Chord Properties

Chord	Area	Rx	Rz	Ryy	Y	Ix	Q	Material
TC	0.6254	0.6208	0.3951	1.2286	0.5603	0.2410	0.9522	23 = 2 x 2 x .163
BC	0.5260	0.4567	0.2934	1.0483	0.4436	0.1097	1.0000	1K = 1 1/2 x 1 1/2 x .187

## Axial and Bending Analysis

K: <b>0.75</b>	Fy: <b>50,000.00</b>	Fb: <b>45,000.00</b>	Mom of Inertia: <b>416.81</b>	LL 240: <b>347.31</b>	LL 240: <b>347.31</b>	Max Bridg TC: <b>17-4 7/8</b>	Max Bridg BC: <b>20-11 5/8</b>
Top Chord Check	End Panel LE	First Panel LE	Interior Panel	First Panel RE	End Panel RE	Gap Between Chords: <b>1.00</b>	
Length	40.00	36.00	28.00	36.00	40.00	Min Weld Len 2X: <b>0.5000</b>	
Bending Load	337.00	337.00	337.00	337.00	337.00	Max Load Fillers TC: <b>47,587.27</b>	
Axial Load	23,133.36	21,517.42	44,614.33	21,517.42	23,133.36	Max Load no Fillers TC: <b>42,699.85</b>	
fa	18,493.93	17,202.07	35,666.87	17,202.07	18,493.93	TC OAL/Ryy: <b>397.1962</b>	
Maximum K L/r	64.44	91.11	35.43	91.11	64.44	BC Stress: <b>42,972.44</b>	
Fa	32,091.07	24,040.47	39,261.95	24,040.47	32,091.07	BC L/Rz: <b>190.8868</b>	
F'e	35,964.30	44,400.38	130,482.73	44,400.38	35,964.30	TC Shear Stress: <b>16,849.89</b>	
Cm	0.8457	0.8838	0.8907	0.8838	0.8457	BC Shear Stress: <b>19,719.95</b>	
Panel Point Moment	4619.03	4619.27	1834.78	4619.27	4619.03		
Mid Panel Moment	3544.56	1290.21	917.39	1290.21	3544.56		
Panel Point fb	13797.02	13797.73	5480.47	13797.73	13797.02		
Mid Panel fb	4120.05	1499.69	1066.33	1499.69	4120.05		
Fillers	1	0	4	0	1		
Panel Point Stress	32,290.95	30,999.80	41,147.34	30,999.80	32,290.95		
Mid Panel Stress	0.7437	0.7660	0.9389	0.7660	0.7437		

## Web Design

Member	Web Tension	Allow Tension	Web Comp	Allow Comp	Weld	Qty	Material
W2	24,889.72	39,929.76	0.00	13,000.33	7.2 x 0.156	2	1J = 1 1/2 x 1 1/2 x .156
W3	0.00	21,796.88	7,953.80	11,704.05	2.9 x 0.125	1	20 = 2 x 2 x .125
W4	9,096.88	9,275.36	0.00	2,105.95	3.7 x 0.109	1	10 = 1 x 1 x .109
W5	0.00	16,171.88	7,442.90	7,860.28	2.7 x 0.125	1	1E = 1 1/2 x 1 1/2 x .125
W6	5,788.92	9,275.36	0.00	2,105.95	2.4 x 0.109	1	10 = 1 x 1 x .109
W7	0.00	11,727.85	4,134.94	4,205.90	2.0 x 0.109	1	15 = 1 1/4 x 1 1/4 x .109
W8	3,603.31	9,275.36	0.00	2,105.95	2.0 x 0.109	1	10 = 1 x 1 x .109
W9	0.00	11,727.85	3,603.31	4,205.90	2.0 x 0.109	1	15 = 1 1/4 x 1 1/4 x .109
V1	0.00	11,727.85	2,467.76	4,205.90	2.0 x 0.109	1	15 = 1 1/4 x 1 1/4 x .109
V2	0.00	9,275.36	1,371.07	4,256.77	2.0 x 0.109	1	10 = 1 x 1 x .109

\* Symmetrical Joist

# STRESS ANALYSIS - PAGE 1



Job Number: <b>00-0002</b>	Job Name: <b>LRFD - SJI SUBMITTAL</b>	Date Run: <b>10/8/2006</b>
Location: <b>JUAREZ,</b>	Joist Description: <b>Deep Long Span 28LH05</b>	Mark: <b>T04S</b>

## Geometry

Base Length: <b>41-0</b>	Working Length: <b>40-8</b>	Joist Depth: <b>28.00</b>	Effective Depth: <b>27.00</b>	BC Panel Length: <b>10 @ 12-0</b>	Shape: <b>Parallel Chords</b>
Variable	Left End	Right End			
BC Panel	5-10	5-10			
TC Panel	3-6	3-6			
First Half	0-8	0-8			
First Diag.	6-6	6-6			
Depth	25.44	30.56			

## Loads

Uniform Load in TC (plf)	515.60	Live Load (plf)	350.40
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## Stress Analysis Summary

2008 Analysis Summary

Int. Panel TC: <b>28.00</b>	Max Panel BC: <b>56.00</b>	Reaction LE: <b>10,004.00</b>	Reaction RE: <b>10,004.00</b>	Minimum Shear: <b>2,501.00</b>	Max TC Comp.: <b>45,103.57</b>	Max BC Tension: <b>45,209.68</b>		
Member	TC Tension	TC Compression	BC Tension	BC Compression	Web Tension	Web Comp.	Web Length	PP Dist.
W2	0.00	24,818.40	0.00	0.00	26,373.39	0.00	72.26	0-2
V1S	0.00	23,084.77	0.00	0.00	0.00	2,544.28	37.45	3-6
W3	0.00	23,084.77	25,423.76	0.00	0.00	7,747.68	26.49	5-10
W4	0.00	32,057.80	25,423.76	0.00	8,930.44	0.00	37.70	6-6
W5	0.00	32,057.80	37,294.32	0.00	0.00	7,126.81	38.09	8-10
W6	0.00	41,187.40	37,294.32	0.00	5,293.64	0.00	38.09	11-2
W7	0.00	41,187.40	43,773.23	0.00	0.00	3,644.73	38.49	13-6
W8	0.00	45,103.57	43,773.23	0.00	3,644.73	0.00	38.49	15-10
W9	0.00	45,103.57	45,209.68	0.00	0.00	3,603.31	38.89	18-2
W9	0.00	44,140.32	45,209.68	0.00	0.00	3,603.31	38.89	20-6
W8	0.00	44,140.32	41,923.31	0.00	3,564.05	0.00	39.30	22-10
W7	0.00	38,603.74	41,923.31	0.00	0.00	4,662.35	39.30	25-2
W6	0.00	38,603.74	34,207.32	0.00	6,232.49	0.00	39.71	27-6
W5	0.00	28,774.82	34,207.32	0.00	0.00	7,707.13	39.71	29-10
W4	0.00	28,774.82	22,331.12	0.00	9,232.48	0.00	40.13	32-2
W3	0.00	20,151.42	22,331.12	0.00	0.00	8,133.51	29.84	34-6
V1S	0.00	20,151.42	0.00	0.00	0.00	2,408.79	40.40	37-6
W2	0.00	21,664.77	0.00	0.00	23,618.83	0.00	74.14	35-2

## Standard Verticals

Member	Position	Max Tension	Max Comp.	Length
V2	Interior	0.00	1,373.52	28.45

# STRESS ANALYSIS - PAGE 2



Job Number: <b>00-0002</b>	Job Name: <b>LRFD - SJI SUBMITTAL</b>	Date Run: <b>10/8/2006</b>
Location: <b>JUAREZ,</b>	Joist Description: <b>Deep Long Span 28LH05</b>	Mark: <b>T04S</b>

## Chord Properties

Chord	Area	Rx	Rz	Ryy	Y	Ix	Q	Material
TC	0.6254	0.6208	0.3951	1.2286	0.5603	0.2410	0.9522	23 = 2 x 2 x .163
BC	0.5260	0.4567	0.2934	1.0483	0.4436	0.1097	1.0000	1K = 1 1/2 x 1 1/2 x .187

## Axial and Bending Analysis

K: <b>0.75</b>	Fy: <b>50,000.00</b>	Fb: <b>45,000.00</b>	Mom of Inertia: <b>416.81</b>	LL 240: <b>347.31</b>	LL 240: <b>347.31</b>	Max Bridg TC: <b>17-4 7/8</b>	Max Bridg BC: <b>20-11 5/8</b>
Top Chord Check	End Panel LE	First Panel LE	Interior Panel	First Panel RE	End Panel RE	Gap Between Chords: <b>1.00</b>	
Length	40.00	36.00	28.00	36.00	40.00	Min Weld Len 2X: <b>0.5000</b>	
Bending Load	337.00	337.00	337.00	337.00	337.00	Max Load Fillers TC: <b>47,586.61</b>	
Axial Load	24,818.40	23,084.77	45,103.57	20,151.42	21,664.77	Max Load no Fillers TC: <b>42,698.78</b>	
fa	19,841.04	18,455.09	36,057.99	16,110.03	17,319.87	TC OAL/Ryy: <b>397.1962</b>	
Maximum K L/r	64.44	91.11	35.43	91.11	101.24	BC Stress: <b>42,972.44</b>	
Fa	32,090.07	24,038.97	39,261.57	24,038.97	20,991.14	BC L/Rz: <b>190.8868</b>	
F'e	35,960.41	44,395.57	130,468.61	44,395.57	35,960.41	TC Shear Stress: <b>16,830.31</b>	
Cm	0.8345	0.8753	0.8895	0.8911	0.8555	BC Shear Stress: <b>19,680.55</b>	
Panel Point Moment	4619.53	4619.77	1834.98	4619.77	4619.53		
Mid Panel Moment	3544.95	1290.35	917.49	1290.35	3544.95		
Panel Point fb	13798.52	13799.23	5481.06	13799.23	13798.52		
Mid Panel fb	4120.49	1499.85	1066.45	1499.85	4120.49		
Fillers	1	0	4	0	0		
Panel Point Stress	33,639.56	32,254.31	41,539.05	29,909.26	31,118.39		
Mid Panel Stress	0.7973	0.8202	0.9490	0.7191	0.9838		

## Web Design

Member	Web Tension	Allow Tension	Web Comp	Allow Comp	Weld	Qty	Material
W2	26,373.39	39,929.76	0.00	13,325.58	7.6 x 0.156	2	1J = 1 1/2 x 1 1/2 x .156
W3	0.00	19,964.88	7,747.68	8,524.72	2.2 x 0.156	1	1J = 1 1/2 x 1 1/2 x .156
W4	8,930.44	9,275.36	0.00	2,241.28	3.7 x 0.109	1	10 = 1 x 1 x .109
W5	0.00	16,171.88	7,126.81	8,081.31	2.6 x 0.125	1	1E = 1 1/2 x 1 1/2 x .125
W6	5,293.64	9,275.36	0.00	2,195.30	2.2 x 0.109	1	10 = 1 x 1 x .109
W7	0.00	11,727.85	3,644.73	4,294.26	2.0 x 0.109	1	15 = 1 1/4 x 1 1/4 x .109
W8	3,644.73	9,275.36	0.00	2,150.19	2.0 x 0.109	1	10 = 1 x 1 x .109
W9	0.00	11,727.85	3,603.31	4,205.90	2.0 x 0.109	1	15 = 1 1/4 x 1 1/4 x .109
W9	0.00	11,727.85	3,603.31	4,205.90	2.0 x 0.109	1	15 = 1 1/4 x 1 1/4 x .109
W8	3,564.05	9,275.36	0.00	2,062.59	2.0 x 0.109	1	10 = 1 x 1 x .109
W7	0.00	14,180.35	4,662.35	6,692.18	2.0 x 0.109	1	1C = 1 1/2 x 1 1/2 x .109
W6	6,232.49	9,275.36	0.00	2,020.11	2.6 x 0.109	1	10 = 1 x 1 x .109
W5	0.00	17,773.02	7,707.13	8,447.07	2.5 x 0.138	1	1G = 1 1/2 x 1 1/2 x .138
W4	9,232.48	9,275.36	0.00	1,978.50	3.8 x 0.109	1	10 = 1 x 1 x .109
W3	0.00	21,796.88	8,133.51	11,086.97	2.9 x 0.125	1	20 = 2 x 2 x .125
W2	23,618.83	39,929.76	0.00	12,660.81	6.8 x 0.156	2	1J = 1 1/2 x 1 1/2 x .156
V1	0.00	11,727.85	2,544.28	3,898.88	2.0 x 0.109	1	15 = 1 1/4 x 1 1/4 x .109
V2	0.00	9,275.36	1,373.52	4,619.60	2.0 x 0.109	1	10 = 1 x 1 x .109



# STRESS ANALYSIS - PAGE 1



Job Number: <b>00-0002</b>	Job Name: <b>LRFD - SJI SUBMITTAL</b>	Date Run: <b>10/8/2006</b>
Location: <b>JUAREZ,</b>	Joist Description: <b>Deep Long Span 32LH10</b>	Mark: <b>T05</b>

## Geometry

Base Length: <b>55-0</b>	Working Length: <b>54-8</b>	Joist Depth: <b>32.00</b>	Effective Depth: <b>30.57</b>	BC Panel Length: <b>10 @ 12-0</b>	Shape: <b>Parallel Chords</b>
Variable	Left End	Right End			
BC Panel	6-8	6-8			
TC Panel	4-6	4-6			
First Half	2-2	2-2			
First Diag.	8-10	8-10			
Depth	32.00	32.00			

## Loads

Uniform Load in TC (plf)	697.60	Live Load (plf)	406.40
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## Stress Analysis Summary

Int. Panel TC: <b>32.00</b>	Max Panel BC: <b>64.00</b>	Reaction LE: <b>17,930.67</b>	Reaction RE: <b>17,930.67</b>	Minimum Shear: <b>4,482.67</b>	Max TC Comp.: <b>96,183.77</b>	Max BC Tension <b>95,268.28</b>		
Member	TC Tension	TC Compression	BC Tension	BC Compression	Web Tension	Web Comp.	Web Length	PP Dist.
W2	0.00	42,119.73	0.00	0.00	45,239.70	0.00	83.78	0-2
V1S	0.00	39,702.27	0.00	0.00	0.00	4,212.53	40.13	4-6
W3	0.00	39,702.27	51,324.71	0.00	0.00	17,940.43	40.13	6-8
W4	0.00	63,226.09	51,324.71	0.00	16,460.10	0.00	44.26	8-10
W5	0.00	63,226.09	73,296.50	0.00	0.00	13,927.78	44.26	11-6
W6	0.00	81,535.91	73,296.50	0.00	11,395.46	0.00	44.26	14-2
W7	0.00	81,535.91	87,944.34	0.00	0.00	8,863.13	44.26	16-10
W8	0.00	92,521.81	87,944.34	0.00	6,489.08	0.00	44.26	19-6
W9	0.00	92,521.81	95,268.28	0.00	0.00	6,489.08	44.26	22-2
W10	0.00	96,183.77	95,268.28	0.00	6,489.08	0.00	44.26	24-10

\* Symmetrical Joist

## Standard Verticals

Member	Position	Max Tension	Max Comp.	Length
V2	Interior	0.00	2,230.25	30.57

## STRESS ANALYSIS - PAGE 2



Job Number: <b>00-0002</b>	Job Name: <b>LRFD - SJI SUBMITTAL</b>	Date Run: <b>10/8/2006</b>
Location: <b>JUAREZ,</b>	Joist Description: <b>Deep Long Span 32LH10</b>	Mark: <b>T05</b>

### Chord Properties

Chord	Area	Rx	Rz	Ryy	Y	Ix	Q	Material
TC	1.1875	0.7695	0.4915	1.4400	0.7171	0.7031	1.0000	2F = 2 1/2 x 2 1/2 x .250
BC	1.0971	0.7723	0.4925	1.4353	0.7099	0.6543	0.9964	2E = 2 1/2 x 2 1/2 x .230

### Axial and Bending Analysis

K: <b>0.75</b>	Fy: <b>50,000.00</b>	Fb: <b>45,000.00</b>	Mom of Inertia: <b>1,067.41</b>	LL 240: <b>366.14</b>	LL 240: <b>366.14</b>	Max Bridg TC: <b>20-4 3/4</b>	Max Bridg BC: <b>28-8 1/2</b>
Top Chord Check	End Panel LE	First Panel LE	Interior Panel	First Panel RE	End Panel RE	Gap Between Chords: <b>1.00</b>	
Length	52.00	52.00	32.00	52.00	52.00	Min Weld Len 2X: <b>1.0364</b>	
Bending Load	462.00	462.00	462.00	462.00	462.00	Max Load Fillers TC: <b>96,665.67</b>	
Axial Load	42,119.73	39,702.27	96,183.77	39,702.27	42,119.73	Max Load no Fillers TC: <b>87,784.55</b>	
fa	17,734.63	16,716.74	40,498.43	16,716.74	17,734.63	TC OAL/Ryy: <b>455.5704</b>	
Maximum K L/r	67.58	105.81	32.56	105.81	67.58	BC Stress: <b>43,418.23</b>	
Fa	32,225.63	19,847.87	41,644.32	19,847.87	32,225.63	BC L/Rz: <b>129.9600</b>	
F'e	32,700.47	32,700.47	153,510.53	32,700.47	32,700.47	TC Shear Stress: <b>15,908.06</b>	
Cm	0.8373	0.8466	0.8945	0.8466	0.8373	BC Shear Stress: <b>17,268.88</b>	
Panel Point Moment	11544.27	11546.60	3285.33	11546.60	11544.27		
Mid Panel Moment	7880.95	4461.91	1642.67	4461.91	7880.95		
Panel Point fb	14635.88	14638.84	4165.16	14638.84	14635.88		
Mid Panel fb	4018.72	2275.26	837.64	2275.26	4018.72		
Fillers	1	0	6	0	1		
Panel Point Stress	32,370.51	31,355.59	44,663.59	31,355.59	32,370.51		
Mid Panel Stress	0.7137	0.9298	0.9951	0.9298	0.7137		

### Web Design

Member	Web Tension	Allow Tension	Web Comp	Allow Comp	Weld	Qty	Material
W2	45,239.70	47,342.79	0.00	11,657.57	10.9 x 0.187	2	1K = 1 1/2 x 1 1/2 x .187
W3	0.00	28,360.71	17,940.43	18,981.05	7.4 x 0.109	2	1C = 1 1/2 x 1 1/2 x .109
W4	16,460.10	17,773.02	0.00	7,061.66	5.4 x 0.138	1	1G = 1 1/2 x 1 1/2 x .138
W5	0.00	24,819.80	13,927.78	14,062.51	4.4 x 0.143	1	21 = 2 x 2 x .143
W6	11,395.46	11,727.85	0.00	3,248.40	4.7 x 0.109	1	15 = 1 1/4 x 1 1/4 x .109
W7	0.00	21,796.88	8,863.13	11,885.45	3.2 x 0.125	1	20 = 2 x 2 x .125
W8	6,489.08	9,275.36	0.00	1,626.52	2.7 x 0.109	1	10 = 1 x 1 x .109
W9	0.00	17,773.02	6,489.08	7,061.66	2.1 x 0.138	1	1G = 1 1/2 x 1 1/2 x .138
W10	6,489.08	9,275.36	0.00	1,626.52	2.7 x 0.109	1	10 = 1 x 1 x .109
V1	0.00	13,359.38	4,212.53	4,469.78	2.0 x 0.125	1	18 = 1 1/4 x 1 1/4 x .125
V2	0.00	9,275.36	2,230.25	3,408.41	2.0 x 0.109	1	10 = 1 x 1 x .109

\* Symmetrical Joist

# STRESS ANALYSIS - PAGE 1



Job Number: <b>00-0002</b>	Job Name: <b>LRFD - SJI SUBMITTAL</b>	Date Run: <b>10/8/2006</b>
Location: <b>JUAREZ,</b>	Joist Description: <b>Deep Long Span 36LH15</b>	Mark: <b>T06</b>

## Geometry

Base Length: <b>48-0</b>	Working Length: <b>47-8</b>	Joist Depth: <b>36.00</b>	Effective Depth: <b>34.16</b>	BC Panel Length: <b>10 @ 12-0</b>	Shape: <b>Parallel Chords</b>
Variable	Left End	Right End			
BC Panel	7-6	7-6			
TC Panel	4-7	4-7			
First Half	1-6	1-6			
First Diag.	9-0	9-0			
Depth	36.00	36.00			

## Loads

Uniform Load in TC (plf)	1,474.60	Live Load (plf)	1,078.40
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## Stress Analysis Summary

Int. Panel TC: <b>36.00</b>		Max Panel BC: <b>72.00</b>		Reaction LE: <b>33,795.66</b>		Reaction RE: <b>33,795.67</b>		Minimum Shear: <b>8,448.92</b>		Max TC Comp.: <b>141,490.69</b>		Max BC Tension <b>139,248.89</b>	
Member	TC Tension	TC Compression	BC Tension	BC Compression	Web Tension	Web Comp.	Web Length	PP Dist.					
W2	0.00	79,003.42	0.00	0.00	84,745.72	0.00	94.40	0-2					
V1S	0.00	72,585.86	0.00	0.00	0.00	9,674.51	48.90	4-7					
W3	0.00	72,585.86	85,445.21	0.00	0.00	27,582.45	38.61	7-6					
W4	0.00	105,621.58	85,445.21	0.00	27,812.61	0.00	49.63	9-0					
W5	0.00	105,621.58	121,314.33	0.00	0.00	21,632.03	49.63	12-0					
W6	0.00	132,523.44	121,314.33	0.00	15,451.45	0.00	49.63	15-0					
W7	0.00	132,523.44	139,248.89	0.00	0.00	12,275.32	49.63	18-0					
W8	0.00	141,490.69	139,248.89	0.00	12,275.32	0.00	49.63	21-0					

\* Symmetrical Joist

## Standard Verticals

Member	Position	Max Tension	Max Comp.	Length
V2	Interior	0.00	4,961.45	34.16

# STRESS ANALYSIS - PAGE 2



Job Number: <b>00-0002</b>	Job Name: <b>LRFD - SJI SUBMITTAL</b>	Date Run: <b>10/8/2006</b>
Location: <b>JUAREZ,</b>	Joist Description: <b>Deep Long Span 36LH15</b>	Mark: <b>T06</b>

## Chord Properties

Chord	Area	Rx	Rz	Ryy	Y	Ix	Q	Material
TC	2.0867	1.0826	0.6900	1.8419	0.9902	2.4454	0.9854	3E = 3 1/2 x 3 1/2 x .312
BC	1.6070	0.9260	0.5907	1.6401	0.8536	1.3780	1.0000	35 = 3 x 3 x .281

## Axial and Bending Analysis

K: <b>0.75</b>	Fy: <b>50,000.00</b>	Fb: <b>45,000.00</b>	Mom of Inertia: <b>2,122.11</b>	LL 240: <b>1,098.03</b>	LL 240: <b>1,098.03</b>	Max Bridg TC: <b>26-1 1/8</b>	Max Bridg BC: <b>32-9 5/8</b>
Top Chord Check	End Panel LE	First Panel LE	Interior Panel	First Panel RE	End Panel RE	Gap Between Chords: <b>1.00</b>	
Length	53.00	53.00	36.00	53.00	53.00	Min Weld Len 2X: <b>1.5246</b>	
Bending Load	957.00	957.00	957.00	957.00	957.00	Max Load Fillers TC: <b>172,309.89</b>	
Axial Load	79,003.42	72,585.86	141,490.69	72,585.86	79,003.42	Max Load no Fillers TC: <b>162,093.88</b>	
fa	18,930.63	17,392.87	33,903.69	17,392.87	18,930.63	TC OAL/Ryy: <b>310.5505</b>	
Maximum K L/r	76.81	76.81	26.09	76.81	76.81	BC Stress: <b>43,324.68</b>	
Fa	28,986.88	28,986.88	42,222.15	28,986.88	28,986.88	BC L/Rz: <b>121.8910</b>	
F'e	62,301.41	62,301.41	240,061.25	62,301.41	62,301.41	TC Shear Stress: <b>16,932.96</b>	
Cm	0.9088	0.9162	0.9435	0.9162	0.9088	BC Shear Stress: <b>21,950.79</b>	
Panel Point Moment	24739.88	24744.13	8613.00	24744.13	24739.88		
Mid Panel Moment	16998.38	9420.10	4306.50	9420.10	16998.38		
Panel Point fb	12695.82	12698.00	4419.95	12698.00	12695.82		
Mid Panel fb	3441.46	1907.17	871.89	1907.17	3441.46		
Fillers	0	0	0	0	0		
Panel Point Stress	31,626.45	30,090.87	38,323.64	30,090.87	31,626.45		
Mid Panel Stress	0.7544	0.6547	0.8246	0.6547	0.7544		

## Web Design

Member	Web Tension	Allow Tension	Web Comp	Allow Comp	Weld	Qty	Material
W2	84,745.72	91,355.04	0.00	46,265.79	17.9 x 0.212	2	2C = 2 1/2 x 2 1/2 x .212
W3	0.00	39,929.76	27,582.45	29,170.43	7.9 x 0.156	2	1J = 1 1/2 x 1 1/2 x .156
W4	27,812.61	28,144.39	0.00	14,449.09	7.7 x 0.163	1	23 = 2 x 2 x .163
W5	0.00	42,187.50	21,632.03	21,759.96	5.2 x 0.188	1	29 = 2 x 2 x .250
W6	15,451.45	16,171.88	0.00	5,141.58	5.5 x 0.125	1	1E = 1 1/2 x 1 1/2 x .125
W7	0.00	24,819.80	12,275.32	12,491.43	3.9 x 0.143	1	21 = 2 x 2 x .143
W8	12,275.32	13,359.38	0.00	2,923.49	4.4 x 0.125	1	18 = 1 1/4 x 1 1/4 x .125
V1	0.00	21,796.88	9,674.51	10,819.17	3.5 x 0.125	1	20 = 2 x 2 x .125
V2	0.00	11,727.85	4,961.45	5,299.61	2.0 x 0.109	1	15 = 1 1/4 x 1 1/4 x .109

\* Symmetrical Joist

# STRESS ANALYSIS - PAGE 1



Job Number: <b>00-0002</b>	Job Name: <b>LRFD - SJI SUBMITTAL</b>	Date Run: <b>10/8/2006</b>
Location: <b>JUAREZ,</b>	Joist Description: <b>Deep Long Span 40LH08</b>	Mark: <b>T07</b>

## Geometry

Base Length: <b>80-0</b>	Working Length: <b>79-8</b>	Joist Depth: <b>40.00</b>	Effective Depth: <b>38.85</b>	BC Panel Length: <b>10 @ 12-0</b>	Shape: <b>Parallel Chords</b>
Variable	Left End	Right End			
BC Panel	8-4	8-4			
TC Panel	5-1	5-1			
First Half	1-8	1-8			
First Diag.	10-0	10-0			
Depth	40.00	40.00			

## Loads

Uniform Load in TC (plf)	260.20	Live Load (plf)	132.80
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## Stress Analysis Summary

Int. Panel TC: <b>40.00</b>		Max Panel BC: <b>80.00</b>		Reaction LE: <b>9,639.67</b>		Reaction RE: <b>9,639.67</b>		Minimum Shear: <b>2,409.92</b>		Max TC Comp.: <b>59,302.25</b>		Max BC Tension <b>58,886.98</b>	
Member	TC Tension	TC Compresion	BC Tension	BC Compression	Web Tension	Web Comp.	Web Length	PP Dist.					
W2	0.00	22,815.70	0.00	0.00	24,543.11	0.00	105.42	0-2					
V1S	0.00	21,621.27	0.00	0.00	0.00	1,982.45	55.05	5-1					
W3	0.00	21,621.27	25,665.01	0.00	0.00	8,834.68	43.70	8-4					
W4	0.00	32,724.68	25,665.01	0.00	9,841.38	0.00	55.76	10-0					
W5	0.00	32,724.68	38,953.80	0.00	0.00	8,683.57	55.76	13-4					
W6	0.00	44,352.37	38,953.80	0.00	7,525.76	0.00	55.76	16-8					
W7	0.00	44,352.37	48,920.41	0.00	0.00	6,367.95	55.76	20-0					
W8	0.00	52,657.86	48,920.41	0.00	5,210.14	0.00	55.76	23-4					
W9	0.00	52,657.86	55,564.79	0.00	0.00	4,052.33	55.76	26-8					
W10	0.00	57,641.15	55,564.79	0.00	3,458.96	0.00	55.76	30-0					
W11	0.00	57,641.15	58,886.98	0.00	0.00	3,458.96	55.76	33-4					
W12	0.00	59,302.25	58,886.98	0.00	3,458.96	0.00	55.76	36-8					

\* Symmetrical Joist

## Standard Verticals

Member	Position	Max Tension	Max Comp.	Length
V2	Interior	0.00	1,103.18	38.85

# STRESS ANALYSIS - PAGE 2



Job Number: <b>00-0002</b>	Job Name: <b>LRFD - SJI SUBMITTAL</b>	Date Run: <b>10/8/2006</b>
Location: <b>JUAREZ,</b>	Joist Description: <b>Deep Long Span 40LH08</b>	Mark: <b>T07</b>

## Chord Properties

Chord	Area	Rx	Rz	Ryy	Y	Ix	Q	Material
TC	0.8742	0.6113	0.3918	1.2455	0.5852	0.3266	1.0000	28 = 2 x 2 x .232
BC	0.6730	0.6189	0.3944	1.2318	0.5650	0.2578	0.9808	24 = 2 x 2 x .176

## Axial and Bending Analysis

K: <b>0.75</b>	Fy: <b>50,000.00</b>	Fb: <b>45,000.00</b>	Mom of Inertia: <b>1,148.45</b>	LL 240: <b>127.28</b>	LL 240: <b>127.28</b>	Max Bridg TC: <b>17-7 3/4</b>	Max Bridg BC: <b>24-7 5/8</b>
Top Chord Check	End Panel LE	First Panel LE	Interior Panel	First Panel RE	End Panel RE	Gap Between Chords: <b>1.00</b>	
Length	59.00	59.00	40.00	59.00	59.00	Min Weld Len 2X: <b>0.6390</b>	
Bending Load	174.00	174.00	174.00	174.00	174.00	Max Load Fillers TC: <b>62,743.32</b>	
Axial Load	22,815.71	21,621.27	59,302.25	21,621.27	22,815.71	Max Load no Fillers TC: <b>49,756.90</b>	
fa	13,049.84	12,366.66	33,918.94	12,366.66	13,049.84	TC OAL/Ryy: <b>767.5443</b>	
Maximum K L/r	96.52	96.52	51.05	96.52	96.52	BC Stress: <b>43,748.05</b>	
Fa	22,771.25	22,771.25	37,193.05	22,771.25	22,771.25	BC L/Rz: <b>202.8424</b>	
F'e	16,029.49	16,029.49	61,998.50	16,029.49	16,029.49	TC Shear Stress: <b>11,728.97</b>	
Cm	0.7558	0.7686	0.7812	0.7686	0.7558	BC Shear Stress: <b>15,391.21</b>	
Panel Point Moment	5574.80	5575.76	1933.33	5575.76	5574.80		
Mid Panel Moment	3829.78	2123.45	966.67	2123.45	3829.78		
Panel Point fb	12073.09	12075.18	4186.93	12075.18	12073.09		
Mid Panel fb	3430.73	1902.19	865.95	1902.19	3430.73		
Fillers	1	1	10	1	1		
Panel Point Stress	25,122.93	24,441.83	38,105.87	24,441.83	25,122.93		
Mid Panel Stress	0.8831	0.6853	0.9452	0.6853	0.8831		

## Web Design

Member	Web Tension	Allow Tension	Web Comp	Allow Comp	Weld	Qty	Material
W2	24,543.11	26,718.75	0.00	2,915.23	8.8 x 0.125	2	18 = 1 1/4 x 1 1/4 x .125
W3	0.00	32,086.39	8,834.68	9,086.30	2.1 x 0.187	1	25 = 2 x 2 x .187
W4	9,841.38	10,546.88	0.00	1,157.86	3.5 x 0.125	1	11 = 1 x 1 x .125
W5	0.00	21,796.88	8,683.57	9,258.16	3.1 x 0.125	1	20 = 2 x 2 x .125
W6	7,525.76	9,275.36	0.00	1,024.62	3.1 x 0.109	1	10 = 1 x 1 x .109
W7	0.00	21,796.88	6,367.95	9,258.16	2.3 x 0.125	1	20 = 2 x 2 x .125
W8	5,210.14	9,275.36	0.00	1,024.62	2.1 x 0.109	1	10 = 1 x 1 x .109
W9	0.00	16,171.88	4,052.33	4,072.25	2.0 x 0.125	1	1E = 1 1/2 x 1 1/2 x .125
W10	3,458.96	9,275.36	0.00	1,024.62	2.0 x 0.109	1	10 = 1 x 1 x .109
W11	0.00	14,180.35	3,458.96	3,594.02	2.0 x 0.109	1	1C = 1 1/2 x 1 1/2 x .109
W12	3,458.96	9,275.36	0.00	1,024.62	2.0 x 0.109	1	10 = 1 x 1 x .109
V1	0.00	11,727.85	1,982.45	2,099.68	2.0 x 0.109	1	15 = 1 1/4 x 1 1/4 x .109
V2	0.00	9,275.36	1,103.18	2,110.82	2.0 x 0.109	1	10 = 1 x 1 x .109

\* Symmetrical Joist

# STRESS ANALYSIS - PAGE 1



Job Number: <b>00-0002</b>	Job Name: <b>LRFD - SJI SUBMITTAL</b>	Date Run: <b>10/8/2006</b>
Location: <b>JUAREZ,</b>	Joist Description: <b>Deep Long Span 44LH13</b>	Mark: <b>T08</b>

## Geometry

Base Length: <b>76-0</b>	Working Length: <b>75-8</b>	Joist Depth: <b>44.00</b>	Effective Depth: <b>42.29</b>	BC Panel Length: <b>10 @ 12-0</b>	Shape: <b>Parallel Chords</b>
Variable	Left End	Right End			
BC Panel	9-2	9-2			
TC Panel	6-3	6-3			
First Half	3-2	3-2			
First Diag.	12-4	12-4			
Depth	44.00	44.00			

## Loads

Uniform Load in TC (plf)	670.80	Live Load (plf)	393.60
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## Stress Analysis Summary

Int. Panel TC: <b>44.00</b>		Max Panel BC: <b>88.00</b>	Reaction LE: <b>23,880.40</b>	Reaction RE: <b>23,880.40</b>	Minimum Shear: <b>5,970.10</b>	Max TC Comp.: <b>128,174.50</b>	Max BC Tension <b>126,970.58</b>	
Member	TC Tension	TC Compression	BC Tension	BC Compression	Web Tension	Web Comp.	Web Length	PP Dist.
W2	0.00	56,078.99	0.00	0.00	60,225.55	0.00	115.99	0-2
V1S	0.00	52,901.31	0.00	0.00	0.00	5,625.02	54.90	6-3
W3	0.00	52,901.31	69,182.74	0.00	0.00	24,360.72	56.86	9-2
W4	0.00	84,833.62	69,182.74	0.00	21,708.52	0.00	61.03	12-4
W5	0.00	84,833.62	98,076.66	0.00	0.00	18,368.75	61.03	16-0
W6	0.00	108,911.89	98,076.66	0.00	15,028.98	0.00	61.03	19-8
W7	0.00	108,911.89	117,339.28	0.00	0.00	11,689.20	61.03	23-4
W8	0.00	123,358.84	117,339.28	0.00	8,615.09	0.00	61.03	27-0
W9	0.00	123,358.84	126,970.58	0.00	0.00	8,615.09	61.03	30-8
W10	0.00	128,174.50	126,970.58	0.00	8,615.09	0.00	61.03	34-4

\* Symmetrical Joist

## Standard Verticals

Member	Position	Max Tension	Max Comp.	Length
V2	Interior	0.00	2,955.27	42.29

# STRESS ANALYSIS - PAGE 2



Job Number: <b>00-0002</b>	Job Name: <b>LRFD - SJI SUBMITTAL</b>	Date Run: <b>10/8/2006</b>
Location: <b>JUAREZ,</b>	Joist Description: <b>Deep Long Span 44LH13</b>	Mark: <b>T08</b>

## Chord Properties

Chord	Area	Rx	Rz	Ryy	Y	Ix	Q	Material
TC	1.7747	0.9218	0.5892	1.6470	0.8649	1.5078	1.0000	37 = 3 x 3 x .312
BC	1.4375	0.9304	0.5924	1.6333	0.8424	1.2442	0.9607	33 = 3 x 3 x .250

## Axial and Bending Analysis

K: <b>0.75</b>	Fy: <b>50,000.00</b>	Fb: <b>45,000.00</b>	Mom of Inertia: <b>2,843.86</b>	LL 240: <b>367.86</b>	LL 240: <b>367.86</b>	Max Bridg TC: <b>23-4</b>	Max Bridg BC: <b>32-8</b>
Top Chord Check	End Panel LE	First Panel LE	Interior Panel	First Panel RE	End Panel RE	Gap Between Chords: <b>1.00</b>	
Length	73.00	73.00	44.00	73.00	73.00	Min Weld Len 2X: <b>1.3811</b>	
Bending Load	444.00	444.00	444.00	444.00	444.00	Max Load Fillers TC: <b>140,647.09</b>	
Axial Load	56,078.99	52,901.31	128,174.50	52,901.31	56,078.99	Max Load no Fillers TC: <b>123,946.30</b>	
fa	15,799.96	14,904.67	36,112.49	14,904.67	15,799.96	TC OAL/Ryy: <b>551.3192</b>	
Maximum K L/r	79.20	79.20	37.34	79.20	79.20	BC Stress: <b>44,163.68</b>	
Fa	28,447.48	28,447.48	40,638.67	28,447.48	28,447.48	BC L/Rz: <b>148.5546</b>	
F'e	23,808.63	23,808.63	116,507.06	23,808.63	23,808.63	TC Shear Stress: <b>14,143.09</b>	
Cm	0.8009	0.8122	0.8760	0.8122	0.8009	BC Shear Stress: <b>17,591.41</b>	
Panel Point Moment	21878.79	21883.33	5969.33	21883.33	21878.79		
Mid Panel Moment	14921.09	8475.79	2984.67	8475.79	14921.09		
Panel Point fb	15490.88	15494.10	4226.48	15494.10	15490.88		
Mid Panel fb	4279.31	2430.82	855.99	2430.82	4279.31		
Fillers	1	1	2	1	1		
Panel Point Stress	31,290.85	30,398.76	40,338.97	30,398.76	31,290.85		
Mid Panel Stress	0.7818	0.6413	0.9128	0.6413	0.7818		

## Web Design

Member	Web Tension	Allow Tension	Web Comp	Allow Comp	Weld	Qty	Material
W2	60,225.55	60,572.16	0.00	14,064.17	15.4 x 0.176	2	24 = 2 x 2 x .176
W3	0.00	43,593.75	24,360.72	26,623.33	8.7 x 0.125	2	20 = 2 x 2 x .125
W4	21,708.52	21,796.88	0.00	8,100.30	7.8 x 0.125	1	20 = 2 x 2 x .125
W5	0.00	43,593.75	18,368.75	25,388.91	6.6 x 0.125	2	20 = 2 x 2 x .125
W6	15,028.98	16,171.88	0.00	3,399.46	5.4 x 0.125	1	1E = 1 1/2 x 1 1/2 x .125
W7	0.00	32,086.39	11,689.20	11,923.78	2.8 x 0.187	1	25 = 2 x 2 x .187
W8	8,615.09	9,275.36	0.00	855.34	3.5 x 0.109	1	10 = 1 x 1 x .109
W9	0.00	24,819.80	8,615.09	9,284.56	2.7 x 0.143	1	21 = 2 x 2 x .143
W10	8,615.09	9,275.36	0.00	855.34	3.5 x 0.109	1	10 = 1 x 1 x .109
V1	0.00	21,796.88	5,625.02	9,452.39	2.0 x 0.125	1	20 = 2 x 2 x .125
V2	0.00	11,727.85	2,955.27	3,557.19	2.0 x 0.109	1	15 = 1 1/4 x 1 1/4 x .109

\* Symmetrical Joist



# STRESS ANALYSIS - PAGE 1



Job Number: <b>00-0002</b>	Job Name: <b>LRFD - SJI SUBMITTAL</b>	Date Run: <b>10/8/2006</b>
Location: <b>JUAREZ,</b>	Joist Description: <b>Deep Long Span 44LH13</b>	Mark: <b>T08S</b>

## Geometry

Base Length: <b>76-0</b>	Working Length: <b>75-8</b>	Joist Depth: <b>44.00</b>	Effective Depth: <b>42.29</b>	BC Panel Length: <b>10 @ 12-0</b>	Shape: <b>Parallel Chords</b>
Variable	Left End	Right End			
BC Panel	9-2	9-2			
TC Panel	6-3	6-3			
First Half	3-2	3-2			
First Diag.	12-4	12-4			
Depth	39.25	48.75			

## Loads

Uniform Load in TC (plf)	670.80	Live Load (plf)	393.60
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## Stress Analysis Summary

2025 Analysis Summary								
Int. Panel TC: <b>44.00</b>	Max Panel BC: <b>88.00</b>	Reaction LE: <b>23,880.40</b>	Reaction RE: <b>23,880.40</b>	Minimum Shear: <b>5,970.10</b>	Max TC Comp.: <b>128,181.43</b>	Max BC Tension: <b>128,361.63</b>		
Member	TC Tension	TC Compression	BC Tension	BC Compression	Web Tension	Web Comp.	Web Length	PP Dist.
W2	0.00	61,306.53	0.00	0.00	64,905.38	0.00	114.35	0-2
V1S	0.00	57,832.63	0.00	0.00	0.00	5,792.04	51.90	6-3
W3	0.00	57,832.63	74,861.73	0.00	0.00	24,433.36	54.51	9-2
W4	0.00	90,738.27	74,861.73	0.00	21,229.09	0.00	58.85	12-4
W5	0.00	90,738.27	103,695.47	0.00	0.00	17,518.01	59.47	16-0
W6	0.00	113,853.15	103,695.47	0.00	13,719.52	0.00	59.47	19-8
W7	0.00	113,853.15	121,282.33	0.00	0.00	10,153.56	60.09	23-4
W8	0.00	126,098.62	121,282.33	0.00	8,766.76	0.00	60.09	27-0
W9	0.00	126,098.62	128,361.63	0.00	0.00	8,664.28	60.71	30-8
W10	0.00	128,181.43	128,361.63	0.00	0.00	8,664.28	60.71	34-4
W10	0.00	128,181.43	125,609.33	0.00	8,567.21	0.00	61.35	38-0
W9	0.00	120,748.38	125,609.33	0.00	0.00	8,567.21	61.35	41-8
W8	0.00	120,748.38	113,644.51	0.00	9,999.29	0.00	61.99	45-4
W7	0.00	104,392.51	113,644.51	0.00	0.00	13,042.98	61.99	49-0
W6	0.00	104,392.51	93,035.45	0.00	16,160.26	0.00	62.64	52-8
W5	0.00	79,658.56	93,035.45	0.00	0.00	19,049.96	62.64	56-4
W4	0.00	79,658.56	64,304.57	0.00	22,081.10	0.00	63.30	60-0
W3	0.00	48,749.74	64,304.57	0.00	0.00	24,270.47	59.28	63-8
V1S	0.00	48,749.74	0.00	0.00	0.00	5,494.08	58.01	69-9
W2	0.00	51,678.05	0.00	0.00	56,360.68	0.00	117.79	66-10

## Standard Verticals

Member	Position	Max Tension	Max Comp.	Length
V2	Interior	0.00	2,955.32	45.04

# STRESS ANALYSIS - PAGE 2



Job Number: <b>00-0002</b>	Job Name: <b>LRFD - SJI SUBMITTAL</b>	Date Run: <b>10/8/2006</b>
Location: <b>JUAREZ,</b>	Joist Description: <b>Deep Long Span 44LH13</b>	Mark: <b>T08S</b>

## Chord Properties

Chord	Area	Rx	Rz	Ryy	Y	Ix	Q	Material
TC	1.7747	0.9218	0.5892	1.6470	0.8649	1.5078	1.0000	37 = 3 x 3 x .312
BC	1.4375	0.9304	0.5924	1.6333	0.8424	1.2442	0.9607	33 = 3 x 3 x .250

## Axial and Bending Analysis

K: <b>0.75</b>	Fy: <b>50,000.00</b>	Fb: <b>45,000.00</b>	Mom of Inertia: <b>2,843.86</b>	LL 240: <b>367.86</b>	LL 240: <b>367.86</b>	Max Bridg TC: <b>23-4</b>	Max Bridg BC: <b>32-8</b>
Top Chord Check	End Panel LE	First Panel LE	Interior Panel	First Panel RE	End Panel RE	Gap Between Chords: <b>1.00</b>	
Length	73.00	73.00	44.00	73.00	73.00	Min Weld Len 2X: <b>1.3811</b>	
Bending Load	444.00	444.00	444.00	444.00	444.00	Max Load Fillers TC: <b>140,645.03</b>	
Axial Load	61,306.53	57,832.63	128,181.43	48,749.74	51,678.05	Max Load no Fillers TC: <b>123,942.81</b>	
fa	17,272.79	16,294.04	36,114.44	13,734.98	14,560.02	TC OAL/Ryy: <b>551.3192</b>	
Maximum K L/r	79.20	79.20	37.34	79.20	79.20	BC Stress: <b>44,647.52</b>	
Fa	28,446.07	28,446.07	40,638.22	28,446.07	28,446.07	BC L/Rz: <b>148.5546</b>	
F'e	23,806.05	23,806.05	116,494.42	23,806.05	23,806.05	TC Shear Stress: <b>14,051.30</b>	
Cm	0.7823	0.7947	0.8760	0.8269	0.8165	BC Shear Stress: <b>17,485.48</b>	
Panel Point Moment	21881.16	21885.70	5969.98	21885.70	21881.16		
Mid Panel Moment	14922.71	8476.71	2984.99	8476.71	14922.71		
Panel Point fb	15492.57	15495.78	4226.94	15495.78	15492.57		
Mid Panel fb	4279.77	2431.09	856.08	2431.09	4279.77		
Fillers	1	1	4	1	1		
Panel Point Stress	32,765.36	31,789.81	40,341.38	29,230.76	30,052.58		
Mid Panel Stress	0.8783	0.7089	0.9128	0.5884	0.7118		

## Web Design

Member	Web Tension	Allow Tension	Web Comp	Allow Comp	Weld	Qty	Material
W2	64,905.38	70,017.75	0.00	16,602.97	15.5 x 0.188	2	26 = 2 x 2 x .205
W3	0.00	43,593.75	24,433.36	27,302.58	8.8 x 0.125	2	20 = 2 x 2 x .125
W4	21,229.09	21,796.88	0.00	8,572.72	7.6 x 0.125	1	20 = 2 x 2 x .125
W5	0.00	39,929.76	17,518.01	18,960.06	5.0 x 0.156	2	1J = 1 1/2 x 1 1/2 x .156
W6	13,719.52	14,180.35	0.00	3,160.25	5.7 x 0.109	1	1C = 1 1/2 x 1 1/2 x .109
W7	0.00	28,144.39	10,153.56	10,834.89	2.8 x 0.163	1	23 = 2 x 2 x .163
W8	8,766.76	9,275.36	0.00	882.45	3.6 x 0.109	1	10 = 1 x 1 x .109
W9	0.00	24,819.80	8,664.28	9,369.10	2.7 x 0.143	1	21 = 2 x 2 x .143
W10	0.00	24,819.80	8,664.28	9,369.10	2.7 x 0.143	1	21 = 2 x 2 x .143
W10	8,567.21	9,275.36	0.00	846.48	3.5 x 0.109	1	10 = 1 x 1 x .109
W9	0.00	24,819.80	8,567.21	9,199.87	2.7 x 0.143	1	21 = 2 x 2 x .143
W8	9,999.29	10,546.88	0.00	936.84	3.6 x 0.125	1	11 = 1 x 1 x .125
W7	0.00	39,337.92	13,042.98	14,023.38	3.1 x 0.188	1	28 = 2 x 2 x .232
W6	16,160.26	16,171.88	0.00	3,226.97	5.8 x 0.125	1	1E = 1 1/2 x 1 1/2 x .125
W5	0.00	43,593.75	19,049.96	24,905.81	6.8 x 0.125	2	20 = 2 x 2 x .125
W4	22,081.10	23,671.40	0.00	4,538.42	5.3 x 0.187	1	1K = 1 1/2 x 1 1/2 x .187
W3	0.00	43,593.75	24,270.47	25,909.46	8.7 x 0.125	2	20 = 2 x 2 x .125
W2	56,360.68	60,572.16	0.00	13,636.03	14.4 x 0.176	2	24 = 2 x 2 x .176
V1	0.00	21,796.88	5,792.04	10,132.35	2.1 x 0.125	1	20 = 2 x 2 x .125
V2	0.00	11,727.85	2,955.32	4,069.17	2.0 x 0.109	1	15 = 1 1/4 x 1 1/4 x .109

# STRESS ANALYSIS - PAGE 1



Job Number: <b>00-0002</b>	Job Name: <b>LRFD - SJI SUBMITTAL</b>	Date Run: <b>10/8/2006</b>
Location: <b>JUAREZ,</b>	Joist Description: <b>Deep Long Span 48LH17</b>	Mark: <b>T09</b>

## Geometry

Base Length: <b>96-0</b>	Working Length: <b>95-8</b>	Joist Depth: <b>48.00</b>	Effective Depth: <b>45.75</b>	BC Panel Length: <b>10 @ 12-0</b>	Shape: <b>Parallel Chords</b>
Variable	Left End	Right End			
BC Panel	10-0	10-0			
TC Panel	6-1	6-1			
First Half	2-0	2-0			
First Diag.	12-0	12-0			
Depth	48.00	48.00			

## Loads

Uniform Load in TC (plf)	770.00	Live Load (plf)	392.00
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## Stress Analysis Summary

Process Analysis Summary

Int. Panel TC: <b>48.00</b>	Max Panel BC: <b>96.00</b>	Reaction LE: <b>34,248.67</b>	Reaction RE: <b>34,248.66</b>	Minimum Shear: <b>8,562.17</b>	Max TC Comp.: <b>214,867.09</b>	Max BC Tension <b>213,364.56</b>
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Member	TC Tension	TC Compression	BC Tension	BC Compression	Web Tension	Web Comp.	Web Length	PP Dist.
W2	0.00	82,878.88	0.00	0.00	88,889.13	0.00	126.56	0-2
V1S	0.00	78,526.44	0.00	0.00	0.00	7,148.07	65.59	6-1
W3	0.00	78,526.44	93,160.64	0.00	0.00	31,499.91	51.66	10-0
W4	0.00	118,703.98	93,160.64	0.00	35,285.86	0.00	66.31	12-0
W5	0.00	118,703.98	141,242.22	0.00	0.00	31,134.59	66.31	16-0
W6	0.00	160,775.38	141,242.22	0.00	26,983.30	0.00	66.31	20-0
W7	0.00	160,775.38	177,303.38	0.00	0.00	22,832.03	66.31	24-0
W8	0.00	190,826.33	177,303.38	0.00	18,680.75	0.00	66.31	28-0
W9	0.00	190,826.33	201,344.16	0.00	0.00	14,529.47	66.31	32-0
W10	0.00	208,856.91	201,344.16	0.00	12,410.59	0.00	66.31	36-0
W11	0.00	208,856.91	213,364.56	0.00	0.00	12,410.59	66.31	40-0
W12	0.00	214,867.09	213,364.56	0.00	12,410.59	0.00	66.31	44-0

\* Symmetrical Joist

## Standard Verticals

Member	Position	Max Tension	Max Comp.	Length
V2	Interior	0.00	3,938.34	45.75

# STRESS ANALYSIS - PAGE 2



Job Number: <b>00-0002</b>	Job Name: <b>LRFD - SJI SUBMITTAL</b>	Date Run: <b>10/8/2006</b>
Location: <b>JUAREZ,</b>	Joist Description: <b>Deep Long Span 48LH17</b>	Mark: <b>T09</b>

## Chord Properties

Chord	Area	Rx	Rz	Ryy	Y	Ix	Q	Material
TC	2.8594	1.2346	0.7876	2.0514	1.1383	4.3586	1.0000	42 = 4 x 4 x .375
BC	2.3987	1.2435	0.7911	2.0386	1.1154	3.7090	0.9348	41 = 4 x 4 x .312

## Axial and Bending Analysis

K: <b>0.75</b>	Fy: <b>50,000.00</b>	Fb: <b>45,000.00</b>	Mom of Inertia: <b>5,467.62</b>	LL 240: <b>349.95</b>	LL 240: <b>349.95</b>	Max Bridg TC: <b>29-0 3/4</b>	Max Bridg BC: <b>40-9 1/4</b>
Top Chord Check	End Panel LE	First Panel LE	Interior Panel	First Panel RE	End Panel RE	Gap Between Chords: <b>1.00</b>	
Length	71.00	71.00	48.00	71.00	71.00	Min Weld Len 2X: <b>2.3152</b>	
Bending Load	515.00	515.00	515.00	515.00	515.00	Max Load Fillers TC: <b>237,042.92</b>	
Axial Load	82,878.88	78,526.44	214,867.09	78,526.44	82,878.88	Max Load no Fillers TC: <b>217,805.11</b>	
fa	14,492.48	13,731.40	37,572.39	13,731.40	14,492.48	TC OAL/Ryy: <b>559.6061</b>	
Maximum K L/r	90.15	90.15	30.47	90.15	90.15	BC Stress: <b>44,475.85</b>	
Fa	24,839.38	24,839.38	42,045.98	24,839.38	24,839.38	BC L/Rz: <b>121.3523</b>	
F'e	45,155.71	45,155.71	175,640.39	45,155.71	45,155.71	TC Shear Stress: <b>12,931.19</b>	
Cm	0.9037	0.9088	0.9144	0.9088	0.9037	BC Shear Stress: <b>15,502.42</b>	
Panel Point Moment	23898.04	23902.19	8240.00	23902.19	23898.04		
Mid Panel Moment	16413.78	9107.56	4120.00	9107.56	16413.78		
Panel Point fb	7845.20	7846.56	2705.01	7846.56	7845.20		
Mid Panel fb	2143.35	1189.29	538.00	1189.29	2143.35		
Fillers	0	0	0	0	0		
Panel Point Stress	22,337.68	21,577.96	40,277.40	21,577.96	22,337.68		
Mid Panel Stress	0.6468	0.5873	0.9075	0.5873	0.6468		

## Web Design

Member	Web Tension	Allow Tension	Web Comp	Allow Comp	Weld	Qty	Material
W2	88,889.13	91,355.04	0.00	27,887.54	21.3 x 0.188	2	2C = 2 1/2 x 2 1/2 x .212
W3	0.00	49,639.59	31,499.91	33,726.78	9.9 x 0.143	2	21 = 2 x 2 x .143
W4	35,285.86	39,337.92	0.00	12,256.87	8.4 x 0.188	1	28 = 2 x 2 x .232
W5	0.00	56,288.79	31,134.59	32,829.86	8.6 x 0.163	2	23 = 2 x 2 x .163
W6	26,983.30	28,144.39	0.00	8,919.56	7.4 x 0.163	1	23 = 2 x 2 x .163
W7	0.00	43,593.75	22,832.03	23,794.72	8.2 x 0.125	2	20 = 2 x 2 x .125
W8	18,680.75	19,964.88	0.00	3,517.17	5.4 x 0.156	1	1J = 1 1/2 x 1 1/2 x .156
W9	0.00	39,929.76	14,529.47	15,816.67	4.2 x 0.156	2	1J = 1 1/2 x 1 1/2 x .156
W10	12,410.59	13,359.38	0.00	1,637.48	4.5 x 0.125	1	18 = 1 1/4 x 1 1/4 x .125
W11	0.00	42,187.50	12,410.59	13,101.22	3.0 x 0.188	1	29 = 2 x 2 x .250
W12	12,410.59	13,359.38	0.00	1,637.48	4.5 x 0.125	1	18 = 1 1/4 x 1 1/4 x .125
V1	0.00	24,819.80	7,148.07	8,089.39	2.2 x 0.143	1	21 = 2 x 2 x .143
V2	0.00	14,180.35	3,938.34	5,311.51	2.0 x 0.109	1	1C = 1 1/2 x 1 1/2 x .109

\* Symmetrical Joist

# STRESS ANALYSIS - PAGE 1



Job Number: <b>00-0002</b>	Job Name: <b>LRFD - SJI SUBMITTAL</b>	Date Run: <b>10/8/2006</b>
Location: <b>JUAREZ,</b>	Joist Description: <b>Deep Long Span 72DLH19</b>	Mark: <b>T10</b>

## Geometry

Base Length: <b>144-0</b>	Working Length: <b>143-8</b>	Joist Depth: <b>72.00</b>	Effective Depth: <b>69.26</b>	BC Panel Length: <b>10 @ 12-0</b>	Shape: <b>Parallel Chords</b>
Variable	Left End	Right End			
BC Panel	15-0	15-0			
TC Panel	9-1	9-1			
First Half	3-0	3-0			
First Diag.	18-0	18-0			
Depth	72.00	72.00			

## Loads

Uniform Load in TC (plf)	743.00	Live Load (plf)	377.60
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## Stress Analysis Summary

Int. Panel TC: <b>72.00</b>		Max Panel BC: <b>144.00</b>		Reaction LE: <b>49,622.47</b>		Reaction RE: <b>49,622.47</b>		Minimum Shear: <b>12,405.62</b>		Max TC Comp.: <b>308,786.66</b>		Max BC Tension <b>306,632.41</b>	
Member	TC Tension	TC Compresion	BC Tension	BC Compression	Web Tension	Web Comp.	Web Length	PP Dist.					
W2	0.00	119,611.84	0.00	0.00	128,348.00	0.00	191.00	0-2					
V1S	0.00	113,297.66	0.00	0.00	0.00	10,364.92	99.19	9-1					
W3	0.00	113,297.66	134,287.28	0.00	0.00	45,512.11	78.06	15-0					
W4	0.00	170,910.61	134,287.28	0.00	50,818.10	0.00	99.91	18-0					
W5	0.00	170,910.61	203,225.33	0.00	0.00	44,839.50	99.91	24-0					
W6	0.00	231,231.39	203,225.33	0.00	38,860.90	0.00	99.91	30-0					
W7	0.00	231,231.39	254,928.86	0.00	0.00	32,882.30	99.91	36-0					
W8	0.00	274,317.69	254,928.86	0.00	26,903.70	0.00	99.91	42-0					
W9	0.00	274,317.69	289,397.91	0.00	0.00	20,925.10	99.91	48-0					
W10	0.00	300,169.47	289,397.91	0.00	17,894.28	0.00	99.91	54-0					
W11	0.00	300,169.47	306,632.41	0.00	0.00	17,894.28	99.91	60-0					
W12	0.00	308,786.66	306,632.41	0.00	17,894.28	0.00	99.91	66-0					

\* Symmetrical Joist

## Standard Verticals

Member	Position	Max Tension	Max Comp.	Length
V2	Interior	0.00	5,688.73	69.26

# STRESS ANALYSIS - PAGE 2



Job Number: <b>00-0002</b>	Job Name: <b>LRFD - SJI SUBMITTAL</b>	Date Run: <b>10/8/2006</b>
Location: <b>JUAREZ,</b>	Joist Description: <b>Deep Long Span 72DLH19</b>	Mark: <b>T10</b>

## Chord Properties

Chord	Area	Rx	Rz	Ryy	Y	Ix	Q	Material
TC	5.7500	1.2996	1.2996	1.6865	1.5543	9.7122	1.0000	P2 = 4 x 0.500 w 4 PL
BC	3.7500	1.2178	0.7823	2.0777	1.1833	5.5615	1.0000	46 = 4 x 4 x .500

## Axial and Bending Analysis

K: <b>0.75</b>	Fy: <b>50,000.00</b>	Fb: <b>45,000.00</b>	Mom of Inertia: <b>21,792.35</b>	LL 240: <b>411.84</b>	LL 240: <b>411.84</b>	Max Bridg TC: <b>23-10 3/4</b>	Max Bridg BC: <b>41-6 5/8</b>
Top Chord Check	End Panel LE	First Panel LE	Interior Panel	First Panel RE	End Panel RE	Gap Between Chords: <b>1.00</b>	
Length	107.00	107.00	72.00	107.00	107.00	Min Weld Len 2X: <b>3.3272</b>	
Bending Load	497.00	497.00	497.00	497.00	497.00	Max Load Fillers TC: <b>401,973.13</b>	
Axial Load	119,611.84	113,297.67	308,786.66	113,297.67	119,611.84	Max Load no Fillers TC: <b>401,973.13</b>	
fa	11,523.30	10,915.00	29,748.23	10,915.00	11,523.30	TC OAL/Ryy: <b>1,022.2497</b>	
Maximum K L/r	82.33	82.33	41.55	82.33	82.33	BC Stress: <b>40,884.32</b>	
Fa	27,414.01	27,414.01	39,663.59	27,414.01	27,414.01	BC L/Rz: <b>184.0800</b>	
F'e	22,030.92	22,030.92	86,499.31	22,030.92	22,030.92	TC Shear Stress: <b>12,744.96</b>	
Cm	0.8431	0.8514	0.8624	0.8514	0.8431	BC Shear Stress: <b>14,105.86</b>	
Panel Point Moment	52391.89	52401.09	17892.00	52401.09	52391.89		
Mid Panel Moment	35970.86	19983.73	8946.00	19983.73	35970.86		
Panel Point fb	6596.48	6597.63	2252.72	6597.63	6596.48		
Mid Panel fb	2878.41	1599.11	715.86	1599.11	2878.41		
Fillers	1	1	14	1	1		
Panel Point Stress	18,119.77	17,512.63	32,000.95	17,512.63	18,119.77		
Mid Panel Stress	0.5899	0.4881	0.7709	0.4881	0.5899		

## Web Design

Member	Web Tension	Allow Tension	Web Comp	Allow Comp	Weld	Qty	Material
W2	128,348.00	129,375.00	0.00	24,989.68	23.0 x 0.250	2	33 = 3 x 3 x .250
W3	0.00	81,002.79	45,512.11	48,966.38	10.9 x 0.187	2	2A = 2 1/2 x 2 1/2 x .187
W4	50,818.10	56,288.79	0.00	17,680.69	14.0 x 0.163	2	23 = 2 x 2 x .163
W5	0.00	98,739.00	44,839.50	46,491.37	10.7 x 0.188	2	2E = 2 1/2 x 2 1/2 x .230
W6	38,860.90	39,337.92	0.00	5,399.12	9.3 x 0.188	1	28 = 2 x 2 x .232
W7	0.00	81,002.79	32,882.30	37,522.47	7.9 x 0.187	2	2A = 2 1/2 x 2 1/2 x .187
W8	26,903.70	28,144.39	0.00	3,929.04	7.4 x 0.163	1	23 = 2 x 2 x .163
W9	0.00	70,017.75	20,925.10	21,749.16	5.0 x 0.188	2	26 = 2 x 2 x .205
W10	17,894.28	23,455.71	0.00	2,868.57	7.4 x 0.109	2	15 = 1 1/4 x 1 1/4 x .109
W11	0.00	60,572.16	17,894.28	18,955.58	4.6 x 0.176	2	24 = 2 x 2 x .176
W12	17,894.28	23,455.71	0.00	2,868.57	7.4 x 0.109	2	15 = 1 1/4 x 1 1/4 x .109
V1	0.00	43,593.75	10,364.92	14,062.40	3.7 x 0.125	2	20 = 2 x 2 x .125
V2	0.00	23,455.71	5,688.73	5,968.39	2.3 x 0.109	2	15 = 1 1/4 x 1 1/4 x .109

\* Symmetrical Joist